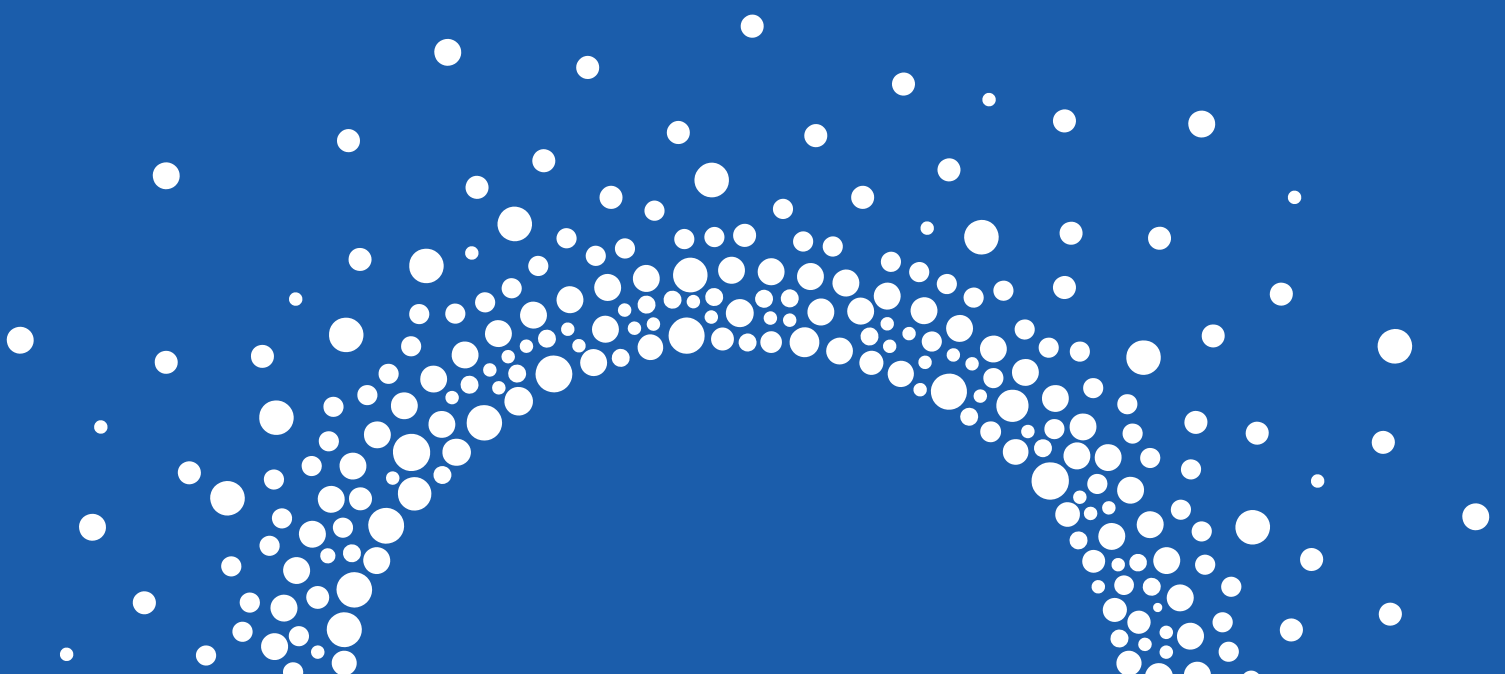


**VDOBIOTECH**





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# COMPANY PROFILE |



VDO Biotech Co., Ltd. is a high-tech enterprise dedicated to innovative microsphere technologies and the production of a variety of high-quality microsphere products for global customers. VDO was founded in 2014, and is headquartered in the BioBAY of Suzhou Industrial Park, China, with a total facility area of over 10,000 square meters. Committed to R&D and innovation, VDO hold 6 authorized patents and 17 pending patents, and have successfully acquired high-tech enterprise certification.

VDO Biotech is deeply engaged in the microsphere innovative development and large-scale production and application. VDO provide microspheres and technical services for both IVD and pharmaceutical applications. The IVD microspheres include magnetic microspheres, latex microspheres, color-dyed microspheres, fluorescent microspheres, flow cytometry microspheres, and standard microspheres; while the chromatography resins cover size exclusion resins, affinity resins, ion exchange resins, hydrophobic interaction resins and multimodal resins. Products can be widely used in molecular diagnosis, immunodiagnosis, and large-scale purification of biological drugs and vaccines. VDO also provide customized services of various types of microspheres, large-scale microsphere conjugation services with antibodies or nucleic acid probes, OEM services for microspheres and intermediates, and complete solutions for microsphere applications.

Led by senior scientists from world-renowned universities, VDO's microsphere scientific team has established an advanced technology platform and a continuously innovative R&D system. VDO have always adhered to high standards of production management, and manufacturing facilities have acquired ISO 9001:2015 certification. VDO has been endorsed by users all over the world for our high-quality products and services, and constantly creating new legends of core suppliers in the IVD field with higher-quality microsphere products.

To better support partners in the IVD and pharmaceutical fields, VDO has also expanded service scope, introduced the product line of protein raw materials, added IVD antibody raw materials, bulk package and resins. With the mission of inspiring and enabling life science innovation, VDO will continue to move forward, innovate constantly, and strive to become the world's leading supplier of life science solutions and diagnostic raw materials. VDO's dedicated staff is your reliable partner for the solution of life science applications!



## Enterprise Cultures

### Vision

To be a world-class biotech company

### Mission

Healthy life starts here

### Values

Preciseness Innovation Collaboration Openness



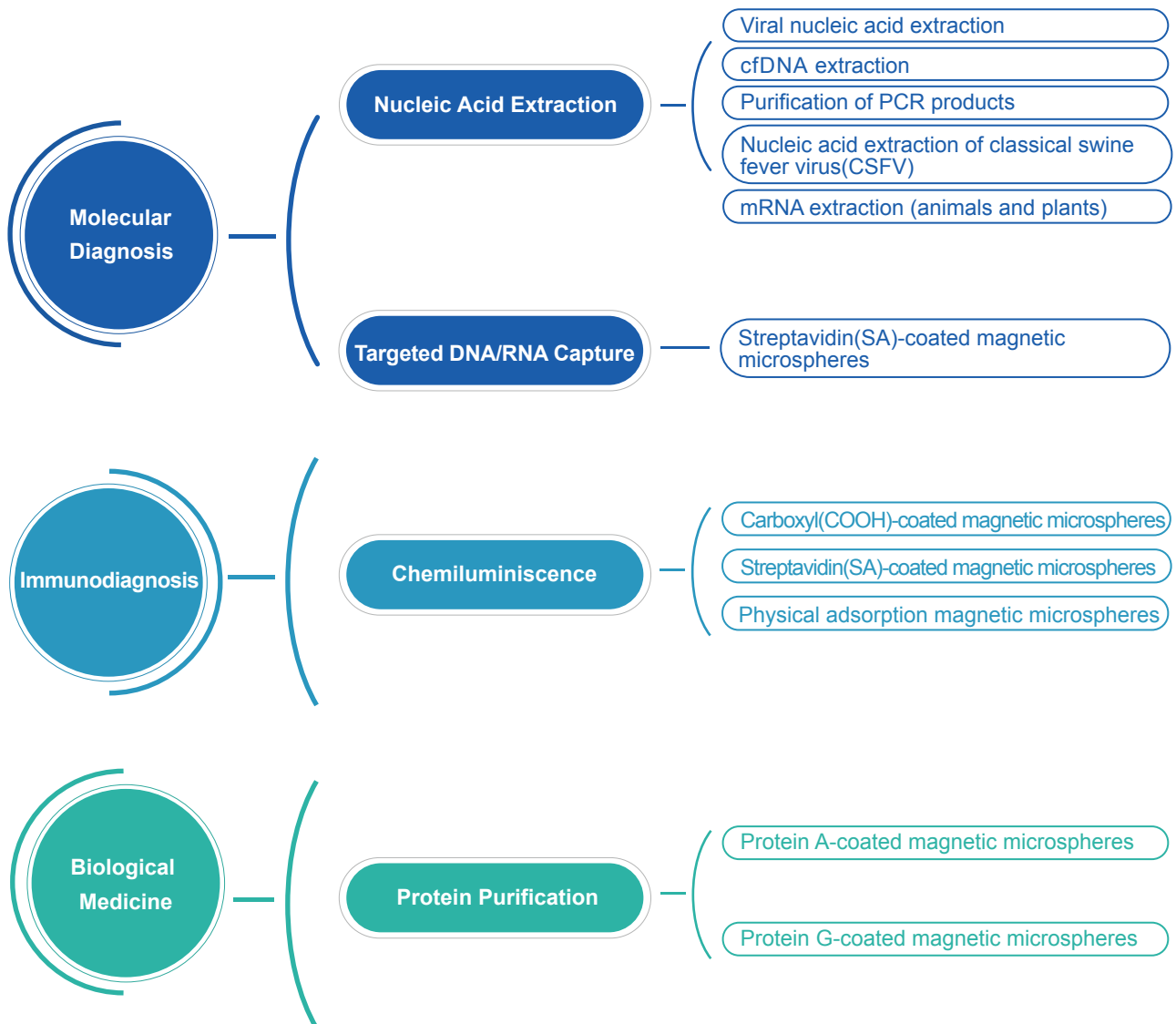
## Microsphere Overall Solutions

- Microsphere OEM services for global customers
- Large scale protein-microsphere conjugation services
- OEM services of microsphere intermediates
- High quality microspheres of nanometer and micrometer level
- Customized microsphere services
- Overall solution for microsphere applications
- Biomacromolecule separation and purification services
- Development of separation and purification process for biological macromolecules
- Optimization of separation and purification process for biological macromolecules
- Overall solution for separation and purification of biological macromolecules

# Microspheres Selection Guide

Due to the superparamagnetism, magnetic microspheres have been widely used in the field of *in vitro* diagnostics (IVD) and biological medicine, such as nucleic extraction, chemiluminescent and protein purification.

## For Magnetic Microspheres

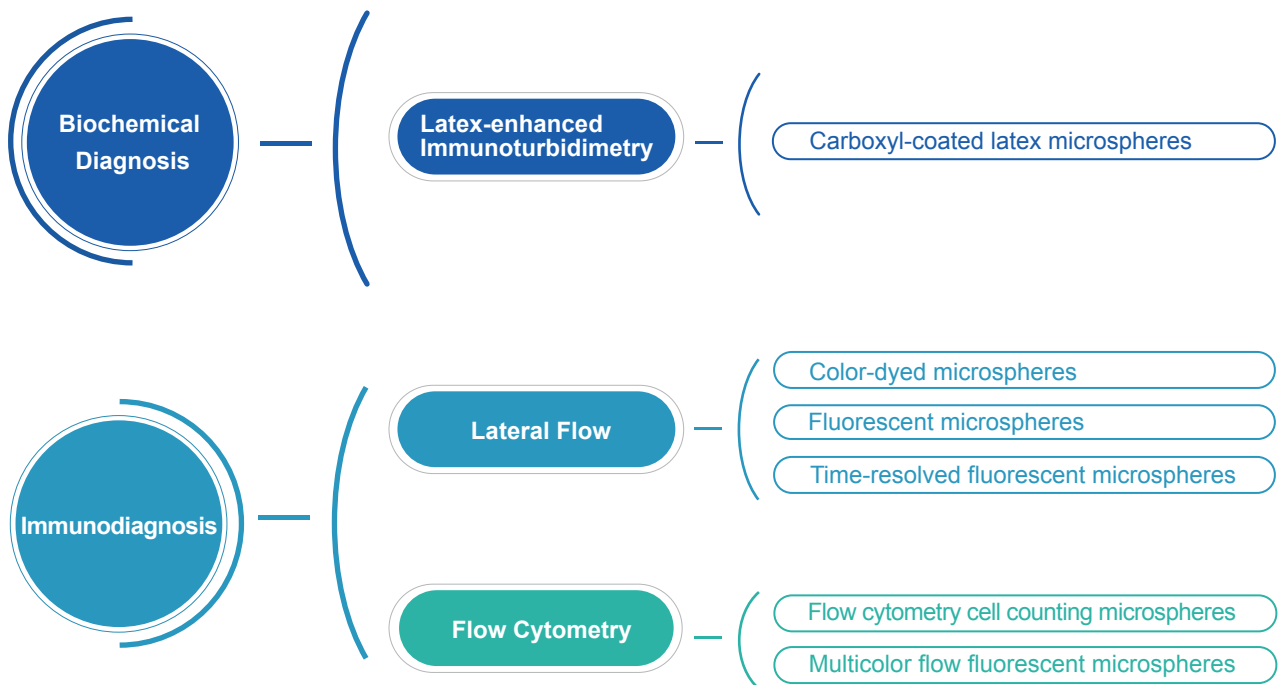


# Microspheres Selection Guide

In addition to magnetic microspheres, our polymer microspheres have been widely used in the field of *in vitro* diagnostics (IVD), e.g., latex-enhanced immunoturbidimetry, lateral flow, flow cytometry, homogeneous chemiluminescent immunoassay.

## For Polymer Microspheres

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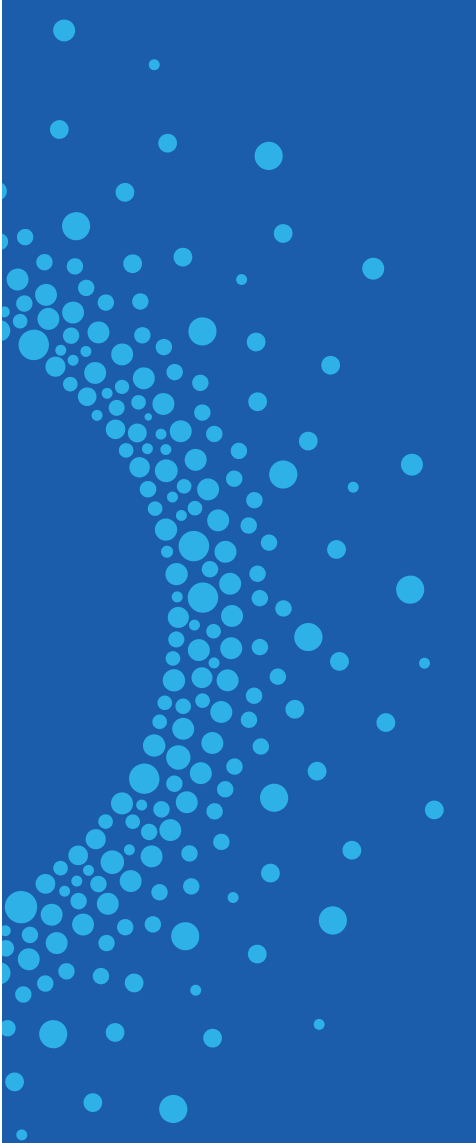
# Microspheres Selection Guide

## For Chromatography Resins

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Recombinant protein	Ni Focurose FF(IDA/IMAC/TED), GST Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Phenyl Focurose FF, Focurose 75PG/200PG
Natural protein	SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Phenyl Focurose FF, Focurose 75PG/200PG
Vaccine, virus	Focurose 4FF, Focurose 30PG/75PG/200PG, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Focore 400/700
Diagnostic antibody antigen	arProtein A Focurose HR, Protein G Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL
Therapeutic antibody	arProtein A Focurose HR, Protein G Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL
Plasmid DNA purification	Focurose 6FF, Plasmid Focurose HPR, Q Focurose HPR, Phenyl Focurose FF, Focore 700
Desalination	Focurose 30PG





# Magnetic Microspheres

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# Nucleic Acid Extraction Magnetic Microspheres

This series of magnetic microspheres have excellent capture ability and elution efficiency for nucleic acids, and are specially designed for nucleic acid extraction and purification. VDO Biotech's magnetic microsphere series integrates the advantages of excellent dispersion, low non-specific binding and fast magnetic response. It is suitable for nucleic acid extraction of various sample types and could meet the requirements of automatic equipment extraction. It is an ideal choice for nucleic acid extraction and purification of biological samples.

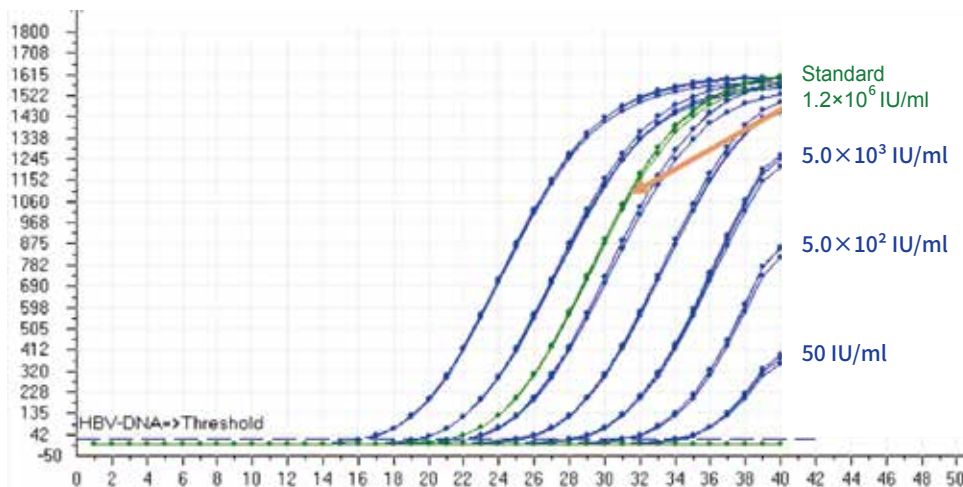


- Large specific surface area: enhanced binding capacity
- Superparamagnetic: excellent resuspension
- Special surface modifications: improved adsorption capacity and easier elution
- Rapid magnetic response: fast magnetic adsorption speed, no magnetic residue
- Production capacity is up to >100L/batch, batch-to-batch consistency: high reproducibility
- Variety selections of diameters and surface groups: applicable to various types of samples



- Composition: Iron oxide ( $\text{Fe}_3\text{O}_4$ )
- Particle size: 50nm-2 $\mu\text{m}$
- Dispersion medium: DI water
- Additive: Contains trace amount of surfactant
- Particle refractive index: NA
- Storage condition: Store at 2-25°C, do not freeze

## Case Study: Nucleic acid extraction using VDO Biotech's magnetic microspheres



- ▲ HBV samples were diluted to different concentrations with serum. The sample can still be detected stably when the concentration is as low as 50 IU/ml.

## Ordering Information:

### Magnetic Microspheres for Nucleic Acid Extraction

Cat. No.	Color	Surface Groups	Solids	Selected Applications
MS02H	Brownish black	OH	2.5%	Viral nucleic acid extraction
MA200H	Brownish black	OH	2.5%	cfDNA extraction PCR products purification
MA0308C	Brownish yellow	COOH	2.5%	Viral nucleic acid extraction
MA0309C	Brownish yellow	COOH	2.5%	Nucleic acid extraction of swine fever virus
MS05HC	Brownish yellow	OH	2.5%	Viral nucleic acid extraction cfDNA extraction Purification of PCR products
MS05HE	Brownish yellow	OH	3.0%	Viral nucleic acid extraction
MS04T	Brownish yellow	Oligo(dT)	1.0%	mRNA extraction from animal and plant samples
MS02HA	Brownish black	OH	2.5%	Virus, pseudovirus particles, small fragment nucleic acid extraction
MS04HC	Brownish black	OH	2.5%	Viral nucleic acid extraction, throat and nose swab serum, vaginal swabs

The magnetic microsphere products above are all available in 10ml, 100ml, and 1L.

### Supporting Raw Material

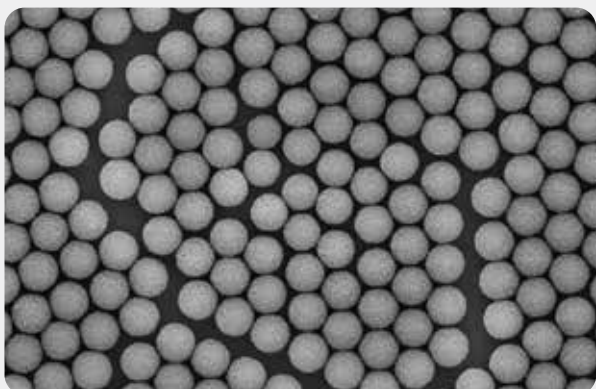
Cat.No.	Product Name	Form	CAS	Use	Size
VYJ1300905	Guanidine Hydrochloride	White crystal	50-01-1	Strong protein allosteric agent	500g
VYJ1300910					1Kg
VYJ1301210	Guanidine Isothiocyanate	White crystal	593-84-0	Strong protein allosteric agent	1Kg
VYJ13012250					25Kg
PK0030	Proteinase K	White lyophilized powder	39450-01-6	Cell lysis	30mg
PK0100					100mg
PK1000					1000mg
PK1050					50g

### Supporting Consumables

Product Name	Size
96-Well Deep Well Plates	A variety of packaging specifications are available.
96-Well Plates	
96-Well Magnetic Rod Cover	
8-Well Magnetic Rod Cover	
96 Sealing Film	

# Streptavidin-coated Magnetic Microspheres

This series of magnetic microspheres coated with streptavidin(SA), which can effectively binds biotinylated derivatives.



## Features

- **Superparamagnetic:** excellent resuspension
- **Hydrophilic surface:** low non-specific binding
- **Uniform diameter:** CV<5%, high reproducibility
- **Coated with streptavidin(SA):** effectively binds biotinylated derivatives
- **Large scale production, batch-to-batch consistency:** superior quality with consistent test results



## Technical Parameters

- **Composition:** Iron oxide ( $Fe_3O_4$ )
- **Uniformity:** CV<5%
- **Particle Size:** 0.6 $\mu$ m, 1 $\mu$ m, 3 $\mu$ m
- **Additive:** Contains trace amount of surfactant
- **Surface Groups:** Streptavidin (SA)
- **Storage condition:** Store at 2-8°C, do not freeze
- **Dispersion Medium:** Magnetic microspheres preservation solution

## Magnetic Microspheres for Targeted DNA/RNA Capture

### Streptavidin-coated Magnetic Microspheres

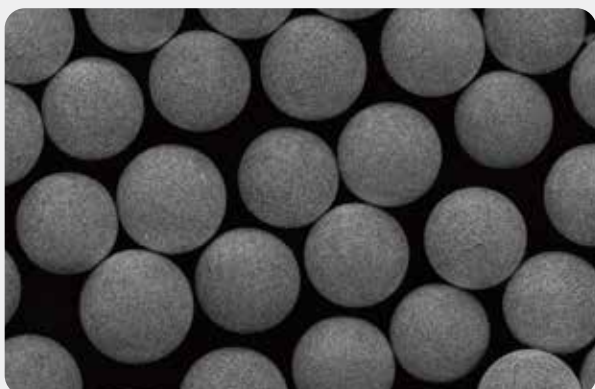
Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
NMP0600SA	0.6 $\mu$ m	Brownish yellow	SA	1.0%	10ml, 100ml, 1L
NMP1001SA	1 $\mu$ m	Brownish yellow	SA	1.0%	10ml, 100ml, 1L
NMP1003SA	3 $\mu$ m	Brownish yellow	SA	1.0%	10ml, 100ml, 1L

### Carboxyl(COOH)-coated Magnetic Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
NMP0600CA	0.6 $\mu$ m	Brownish yellow	COOH	2.5%	10ml, 100ml, 1L
NMP1001CA	1 $\mu$ m	Brownish yellow	COOH	2.5%	10ml, 100ml, 1L
NMP1003CA	3 $\mu$ m	Brownish yellow	COOH	2.5%	10ml, 100ml, 1L
NMP1005CA	5 $\mu$ m	Brownish yellow	COOH	2.5%	10ml, 100ml, 1L

# Magnetic Microspheres for Chemiluminescent

VDO Biotech's magnetic microspheres for chemiluminescent have superparamagnetism and moderate magnetic content, excellent resuspendability and fast magnetic response. With our advanced microsphere synthesis technology, proprietary surface coating process, and variety selections of functional groups, our magnetic microspheres provide comprehensive solutions to meet customers' specific needs of different technology route development. The high-load functional groups guarantee the binding capacity, and this series of products show outstanding performance in the field of immunoassay.



- High magnetic content: fast magnetic response
- Large scale production capacity, up to 1kg/batch: scalable and stable production
- Uniform diameter, stable and controllable surface functional groups: high reproducibility
- Superparamagnetism and proper density: ensures good resuspension and suspension time
- Sufficient surface functional groups: efficiently couple with sufficient amount of target protein

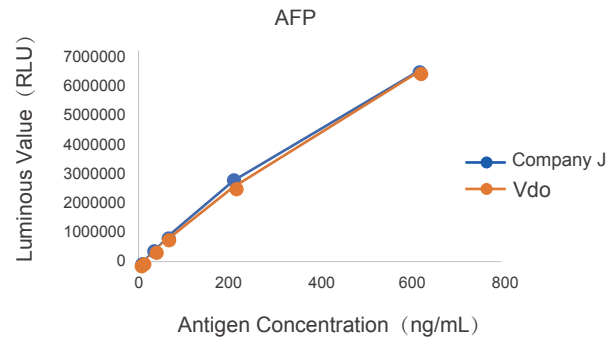


- Composition: Iron oxide ( $\text{Fe}_3\text{O}_4$ )
- Density: 1.05-3.38g/cm<sup>3</sup>
- Additive: Contains trace amount of surfactant
- Uniformity: CV<5%
- Particle Size: 0.6 $\mu\text{m}$ , 1 $\mu\text{m}$ , 1.5 $\mu\text{m}$ , 3 $\mu\text{m}$
- Surface Functional Groups: Carboxyl (COOH) / Streptavidin (SA) / Tosyl

## Case Studies

### Detection of alpha-fetoprotein (AFP) by magnetic microsphere chemiluminescence method

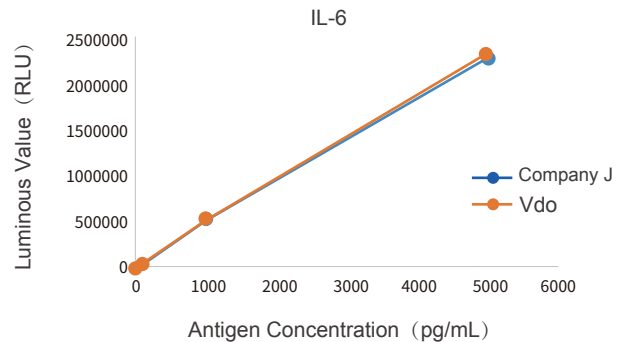
Antigen Concentration	Company J's Magnetic Microspheres	VDO's Magnetic Microspheres
0ng/ml	8787	8061
5ng/ml	99936	95505
25ng/ml	406235	380296
50ng/ml	809104	760986
200ng/ml	2853867	2601184
600ng/ml	6519703	6430896



- ▲ Under the same conditions, when the antigen concentration is 0ng/ml, VDO's magnetic microspheres shows less interference; with other antigen concentrations, the signal strength of VDO's and Company J's magnetic microspheres are comparable.

### Detection of interleukin-6 (IL-6) by magnetic microsphere chemiluminescence method

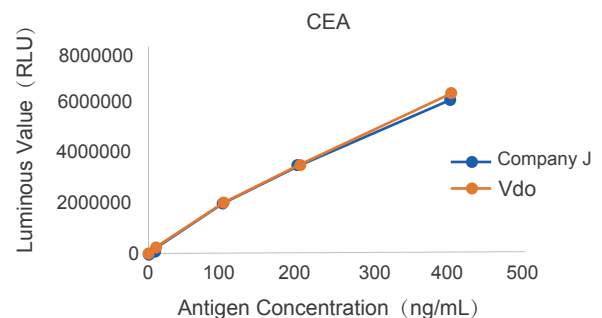
Antigen Concentration	Company J's Magnetic Microspheres	VDO's Magnetic Microspheres
0pg/ml	427	512
5pg/ml	3994	5480
10pg/ml	7574	8397
100pg/ml	64156	64153
1000pg/ml	523644	540526
5000pg/ml	2312713	2372842



- ▲ Under the same conditions, the signal of VDO's magnetic microspheres is stronger than Company J's;

### Detection of carcinoembryonic antigen (CEA) by magnetic microsphere chemiluminescence method

Antigen Concentration	Company J's Magnetic Microspheres	VDO's Magnetic Microspheres
0ng/mL	912	932
2.5ng/mL	60938	59971
10ng/mL	232329	230206
100ng/mL	2086443	2006086
200ng/mL	3544656	3490347
400ng/mL	6092158	6286711



- ▲ Under the same conditions, the signal strength of VDO's and Company J's magnetic microspheres are comparable.

## Ordering Information

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
CMP0600CA	0.6µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP0600CB	0.6µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP1001CA	1µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP1001CB	1µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP2015CA	1.5µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP1003CA	3µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP1003CC	3µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP1005CA	5µm	Brownish yellow	COOH	2.50%	1mL,10mL,100mL,1L
CMP0600SA	0.6µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP0600SB	0.6µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1001SA	1µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1001SB	1µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP2015SA	1.5µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1003SA	3µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1003SC	3µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1005SA	5µm	Brownish yellow	SA	1.00%	1mL,10mL,100mL,1L
CMP1001TA	1µm	Brownish yellow	Tosyl	2.50%	1mL,10mL,100mL,1L
CMP2015TA	1.5µm	Brownish yellow	Tosyl	2.50%	1mL,10mL,100mL,1L
CMP1003TA	3µm	Brownish yellow	Tosyl	2.50%	1mL,10mL,100mL,1L



# Magnetic Microspheres for Protein Purification

VDO Biotech has developed a series of protein purification microspheres with uniform particle size, stable and controllable surface functional groups, and high experimental repeatability. It is suitable for high-throughput purification and can directly prepare high-purity target protein from crude samples. Moreover, we can customize microspheres with different particle sizes and surface functional groups to meet customers' specific purification needs for various sample types and applications.



- **Composition:** Iron oxide ( $\text{Fe}_3\text{O}_4$ )
- **Particle Size:** 0.6 $\mu\text{m}$ , 3 $\mu\text{m}$ , 5 $\mu\text{m}$ , 50 $\mu\text{m}$
- **Surface Modification:** Protein A / Protein G
- **Dispersion Medium:** DI water or neutral buffer
- **Storage Condition:** Store at 2-8°C, do not freeze

## Ordering Information

### Protein A-coated Magnetic Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
PMP0600AA	0.6 $\mu\text{m}$	Brownish yellow	Protein A	1.0%	10ml, 100ml, 1L
PMP1003AA	3 $\mu\text{m}$	Brownish yellow	Protein A	1.0%	10ml, 100ml, 1L
PMP1005AA	5 $\mu\text{m}$	Brownish yellow	Protein A	1.0%	10ml, 100ml, 1L
PMP1050AA	50 $\mu\text{m}$	Brownish yellow	Protein A	1.0%	10ml, 100ml, 1L

### Protein G-coated Magnetic Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
PMP0600GA	0.6 $\mu\text{m}$	Brownish yellow	Protein G	1.0%	10ml, 100ml, 1L
PMP1003GA	3 $\mu\text{m}$	Brownish yellow	Protein G	1.0%	10ml, 100ml, 1L
PMP1005GA	5 $\mu\text{m}$	Brownish yellow	Protein G	1.0%	10ml, 100ml, 1L
PMP1050GA	50 $\mu\text{m}$	Brownish yellow	Protein G	1.0%	10ml, 100ml, 1L

Other specifications can be customized upon request.

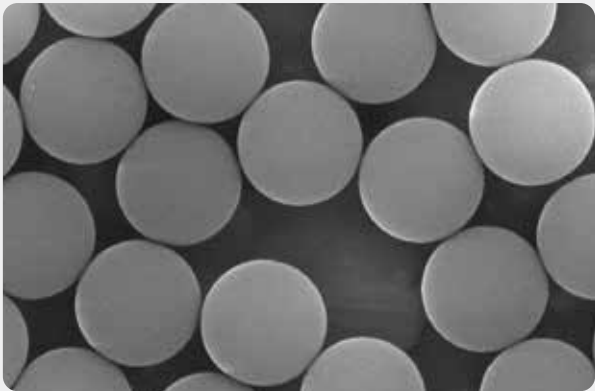


# Polymeric Microspheres

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# Latex Microspheres

VDO Biotech's latex microspheres are made of polystyrene. Through our proprietary surface coating process, different functional groups are added to the microspheres in controlled amounts. We provide microspheres with customized particle sizes to meet customers' specific needs for sensitivity and linear range. This series of latex microspheres are widely used for different applications, such as particle enhanced immunoturbidimetry (PET), latex agglutination test, and microsphere capture enzyme-linked immunosorbent assay, etc.



- **Sufficient surface functional groups:** efficiently couple with sufficient amount of target protein
- **Uniform diameter, stable and controllable surface functional groups:** high reproducibility
- **Large scale production capacity:** up to 100L/batch, batch-to-batch consistency, scalable and stable production
- **Customized particle sizes and surface functional groups:** satisfy customers' specific product development needs



- **Material:** Polystyrene polymer
- **Density:** 1.05g/cm<sup>3</sup>
- **Additive:** Contains trace amount of surfactant
- **Particle Refractive Index:** 1.59 (589nm wavelength, 25°C)
- **Uniformity:** CV<5%
- **Particle Size:** 80nm ~ 400nm
- **Dispersion Medium:** DI water
- **Storage Condition:** Store at 2-25°C; do not freeze

## Ordering Information

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### Carboxyl-coated Latex Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
PS0080CHA	80nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0080CLA	80nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0100CHA	100nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0100CLA	100nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0120CHA	120nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0120CLA	120nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0150CHA	150nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0150CLA	150nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0180CHA	180nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0180CLA	180nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0200CHA	200nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0200CLA	200nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0300CHA	300nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0300CLA	300nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0400CHA	400nm	White	COOH	10.0%	10ml, 100ml, 1L
PS0400CLA	400nm	White	COOH	10.0%	10ml, 100ml, 1L

Microspheres with other functional groups and particle sizes can be customized upon request.

# Color-dyed Microspheres

Utilizing our proprietary internal saturation dyeing process, VDO Biotech has developed a series of color-dyed microspheres. This series of products are bright and diverse in color, suitable for qualitative and semi-quantitative detection. The product covers the colors of the rainbow series, which can help avoid the background interference of sample, and also provide an effective tool for multiple chromatography detection. Color-dyed microspheres are ideal for technology platforms such as agglutination testing and lateral flow.

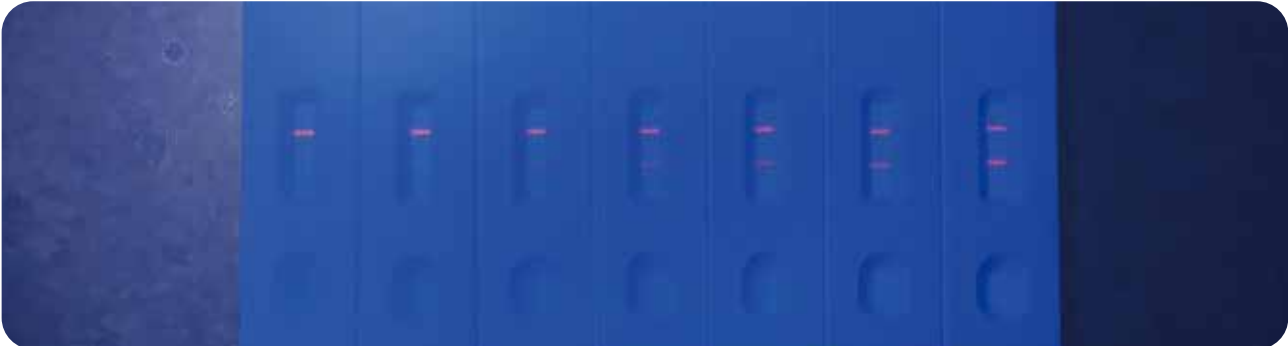


- **Sufficient surface groups:** higher protein binding capacity
- **Higher sensitivity:** ideal alternative to colloidal gold
- **Large scale production:** production capacity is up to 500 million tests/batch
- **Internal dyeing method:** rich colors, no dye on the particle surface, easy to couple
- **Customized production:** various options of particle size, surface group content, and color/fluorescence dyeing



- **Material:** Polystyrene polymer
- **Uniformity:** CV<5%
- **Particle Size:** 200nm - 400nm
- **Surface Functional Groups:** Carboxyl (COOH), Streptavidin (SA)
- **Additive:** Contains trace amount of surfactant
- **Storage Condition:** Carboxyl-coated microspheres: 2-25°C; do not freeze  
Streptavidin-coated microspheres: 2-8°C; do not freeze

Case Studies:  
Application of color-dyed and time-resolved fluorescent microspheres in lateral flow



0pg/ml | 25pg/ml | 50pg/ml | 100pg/ml | 200pg/ml | 500pg/ml | 1000pg/ml

▲ SARS-CoV-2 N protein was detected by VDO Biotech's color-dyed microspheres and time-resolved fluorescent microspheres respectively, and the protein can still be detected when the concentration is as low as 25pg/mL.

## Ordering Information

### Carboxyl Color-dyed Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DR0200CA	200nm	Red	COOH	4.0%	1ml, 25ml, 100ml
DR0300CA	300nm	Red	COOH	4.0%	1ml, 25ml, 100ml
DR0400CA	400nm	Red	COOH	4.0%	1ml, 25ml, 100ml

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DB0200CA	200nm	Blue	COOH	4.0%	1ml, 25ml, 100ml
DB0300CA	300nm	Blue	COOH	4.0%	1ml, 25ml, 100ml
DB0400CA	400nm	Blue	COOH	4.0%	1ml, 25ml, 100ml

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DK0200CA	200nm	Black	COOH	4.0%	1ml, 25ml, 100ml
DK0300CA	300nm	Black	COOH	4.0%	1ml, 25ml, 100ml
DK0400CA	400nm	Black	COOH	4.0%	1ml, 25ml, 100ml

### Streptavidin(SA)-coated Color-dyed Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DR0200SA	200nm	Red	SA	1.0%	1ml, 10ml, 100ml
DR0300SA	300nm	Red	SA	1.0%	1ml, 10ml, 100ml
DR0400SA	400nm	Red	SA	1.0%	1ml, 10ml, 100ml

Other specifications can be customized according to customers' requirements.

### Supporting Raw Materials

Cat. No.	Product Name	Use	Type	Size
MIDM01	SARS-CoV-2 NP Antibody	Labelling	Monoclonal antibody (McAb)	1mg, 10mg, 1000mg
MIDM02	SARS-CoV-2 NP Antibody	Coating	Monoclonal antibody (McAb)	1mg, 10mg, 1000mg
MIDM12	Chicken IgY	Labelling (Quality Control)	Polyclonal antibody (PcAb)	1mg, 10mg, 1000mg
MIDM15	Rabbit anti chicken IgY	Coating (Quality Control)	Polyclonal antibody (PcAb)	1mg, 10mg, 1000mg
M20211	Mouse IgG	Repressor	Polyclonal antibody (PcAb)	1mg, 10mg, 1000mg

Other specifications can be customized according to customers' requirements.

## Supporting Materials (Microspheres Release Pad)

Cat. No.	Product Name	Use	Dimension (Length×Width)	Weight	Size
VHC06001	Glass fiber membrane filter	Microspheres release pad	200×300mm	70-80g/m <sup>2</sup>	100pcs/bag
VHC06002	Glass fiber membrane filter	Microspheres release pad	200×300mm	50-60g/m <sup>2</sup>	100pcs/bag

Other specifications can be customized according to customers' requirements.

## Supporting Raw Materials

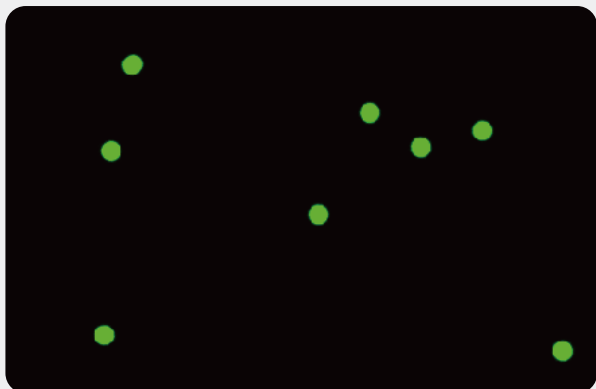
Cat. No.	Product Name	Use	Type	Size
IA0108A	SARS-CoV-2 NP conjugate pad (300nm microspheres)	SARS-CoV-2 NP test	Semi-finished Products	7mm×300mm
IA0109A	SARS-CoV-2 NP conjugate pad (400nm microspheres)	SARS-CoV-2 NP test	Semi-finished Products	7mm×300mm
IA0102A	SARS-CoV-2 NP Test Strips (300nm microspheres)	SARS-CoV-2 NP test	Semi-finished Products	1 test /5 tests/25 tests
IA0103A	SARS-CoV-2 NP Test Strips (400nm microspheres)	SARS-CoV-2 NP test	Semi-finished Products	1 test /5 tests/25 tests
IA0111A	Sample cracking fluid	SARS-CoV-2 NP test	Matching products	/

Other specifications can be customized according to customers' requirements.



# Fluorescent Microspheres

Fluorescent microspheres are internally fluorescent dyed microspheres with good monodispersity and uniform particle size. This series of microspheres have obvious advantages for the development of quantitative detection reagents, and are also recommended for biological research biosensors, biochips, microfluidic and other technical field.



- **Internal dye embedding technology:** full and firm filling
- **High fluorescence intensity:** higher detection precision
- **Sufficient surface groups:** higher protein binding capacity
- **Large scale production:** up to 50L/batch
- **Uniform particle size and controllable surface functional groups:** good experiment repeatability



- **Material:** Polystyrene polymers containing encapsulated dyes
- **Surface Functional Groups:** Carboxyl (COOH) / Streptavidin (SA)
- **Dispersion medium:** DI water
- **Uniformity:** CV < 5%
- **Size range:** 200nm - 400nm
- **Additives:** Contains trace amount of surfactant
- **Storage conditions:** Carboxyl-coated microspheres: 2 - 25°C in dark condition, do not freeze; Streptavidin-coated microspheres: 2 - 25°C in dark condition, do not freeze

## Ordering Information

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### Green Fluorescent Microspheres

Cat. No.	Particle Size	Fluorescence	Excitation	Emission	Surface Groups	Solids	Size
FG0200CA	200nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml
FG0300CA	300nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml
FG0400CA	400nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml

Other specifications can be customized according to customers' requirements.

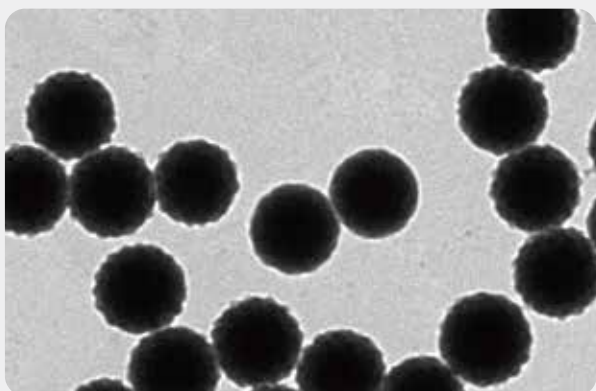
### SA-coated Fluorescent Microspheres

Cat. No.	Particle Size	Fluorescence	Excitation	Emission	Surface Groups	Solids	Size
FG0200SA	200nm	Green fluorescence	488nm	520nm	SA	1.0%	1ml, 10ml, 100ml
FG0300SA	300nm	Green fluorescence	488nm	520nm	SA	1.0%	1ml, 10ml, 100ml
FG0400SA	400nm	Green fluorescence	488nm	520nm	SA	1.0%	1ml, 10ml, 100ml

Other specifications can be customized according to customers' requirements.

# Time-resolved Fluorescent Microspheres

VDO Biotech's fluorescent microspheres are designed for ultra-sensitive lateral flow detection. The data can be read by fluorescence detector to achieve a more sensitive quantitative detection, and it is the preferred material for ultra-sensitive lateral flow detection. The dyes of this product series are embedded in the microspheres and filled firmly. With strong and long-lasting fluorescence intensity, our fluorescent microspheres are ideal for the quantitative detection reagents development.



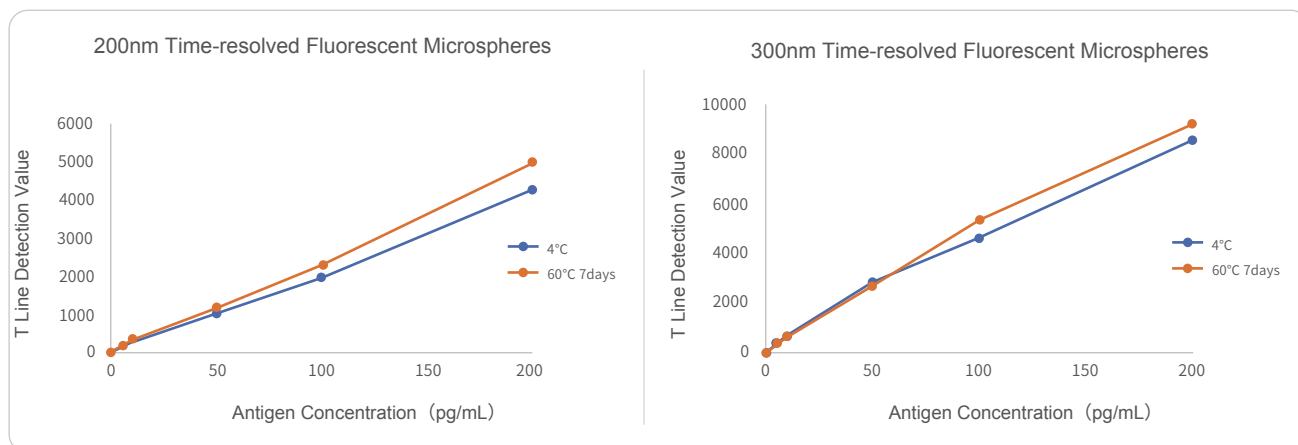
- **High Sensitivity:** 100-1,000 times higher than colloidal gold
- **Easy Operation:** Fast detection, ideal for POCT (point of care testing)
- **Anti-interference:** Rare earth ion markers, long half-life, and large Stokes Shift value
- **Quantitative Detection:** The sample concentration can be detected according to the built-in standard curve



- **Material:** Polystyrene polymers containing Rare earth element dyes
- **Uniformity:** CV<5%
- **Particle Size:** 200nm - 400nm
- **Surface Functional Groups:** Carboxyl (COOH), Streptavidin (SA)
- **Additive:** Contains trace amount of surfactant
- **Storage Condition:** Carboxyl-coated microspheres: 2-25°C; do not freeze  
Streptavidin-coated microspheres: 2-8°C; do not freeze

## Thermal Stability of Time-resolved Fluorescent Microspheres

The time-resolved fluorescent microspheres accelerated at 60°C for 7 days were prepared by double-antibody sandwich method to prepare SARS-CoV-2 antigen detection test strips to detect nCoV-N protein.



\*The results indicate that VDO Biotech's time-resolved fluorescent microspheres have excellent thermal stability.

## Ordering Information

### Time-resolved Fluorescent Microspheres Carboxyl-modified

Cat. No.	Particle Size	Excitation	Emission	Surface Groups	Solids	Size
FT0200CA	200nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml
FT0300CA	300nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml
FT0400CA	400nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml

### Time-resolved Fluorescent Microspheres SA-modified

Cat. No.	Particle Size	Excitation	Emission	Surface Groups	Solids	Size
FT0200SA	200nm	360nm	615nm	SA	1.0%	1ml, 10ml, 100ml
FT0300SA	300nm	360nm	615nm	SA	1.0%	1ml, 10ml, 100ml
FT0400SA	400nm	360nm	615nm	SA	1.0%	1ml, 10ml, 100ml

# Flow Cytometry Microspheres

Flow cytometry (FCM) is a multi-parameter, rapid quantitative technique for the analysis of individual cells or other biological particles at the cellular molecular level. FCM adopts an optical measurement method to count, identify and classify a single cell or other biological particle suspended in a flowing liquid. It can analyze tens of thousands of cells at high speed and measure multiple parameters from one cell at the same time. With the advantages of high speed, high precision and accuracy, FCM is recognized as one of the most advanced cell quantitative analysis techniques.

## Magnetic Fluorescence-encoded Microspheres

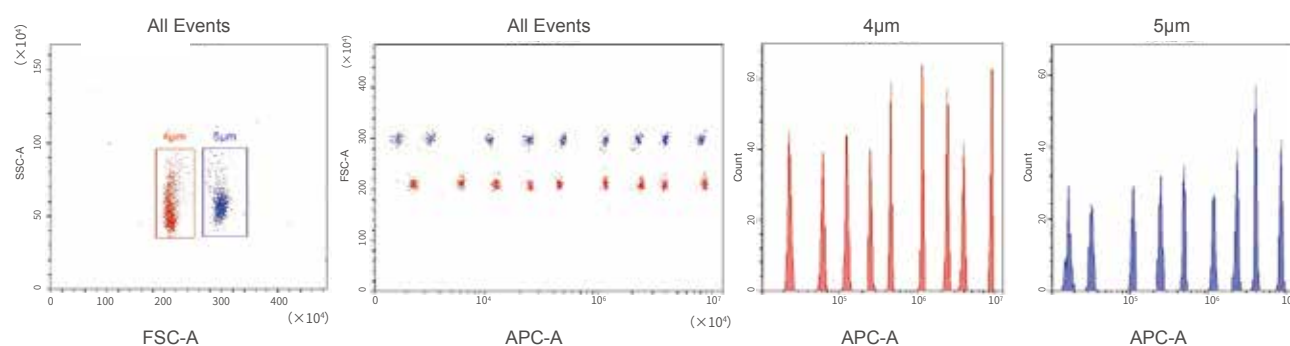
The multiplex flow cytometry platform is well suited for performing multiple analytes in biological samples with the advantages of high sensitivity, wide linear range, and good repeatability. This technology utilizes microspheres of one or more particle sizes as the solid support for a conventional immunoassay which is subsequently analyzed on a flow cytometer. Consequently, multiplex flow cytometry has a wide range of applications in clinical diagnosis and medical research which provides higher clinical value for the diagnostic, monitoring and evaluation of diseases.

VDO Biotech has developed a series of magnetic fluorescence-encoded microspheres with particle sizes of 4  $\mu\text{m}$  and 5  $\mu\text{m}$ . The series of microspheres can simultaneously detect 18 indicators in the sample, as each particle size contains 9 fluorescence intensities. It is an ideal choice for automatic detection because of particle size uniformity and superparamagnetism.



- **Material:**  $\text{Fe}_3\text{O}_4/\text{PS}$
- **Surface Functional Group:** Carboxyl (-COOH)
- **Particle Size:** 4 $\mu\text{m}$ 、5 $\mu\text{m}$
- **Fluorescence Channel:** APC
- **Concentration:**  $1.2 \times 10^8$  beads/mL
- **Multiple assay detection:** 9 fluorescent intensities per particle size

## Performance Verification

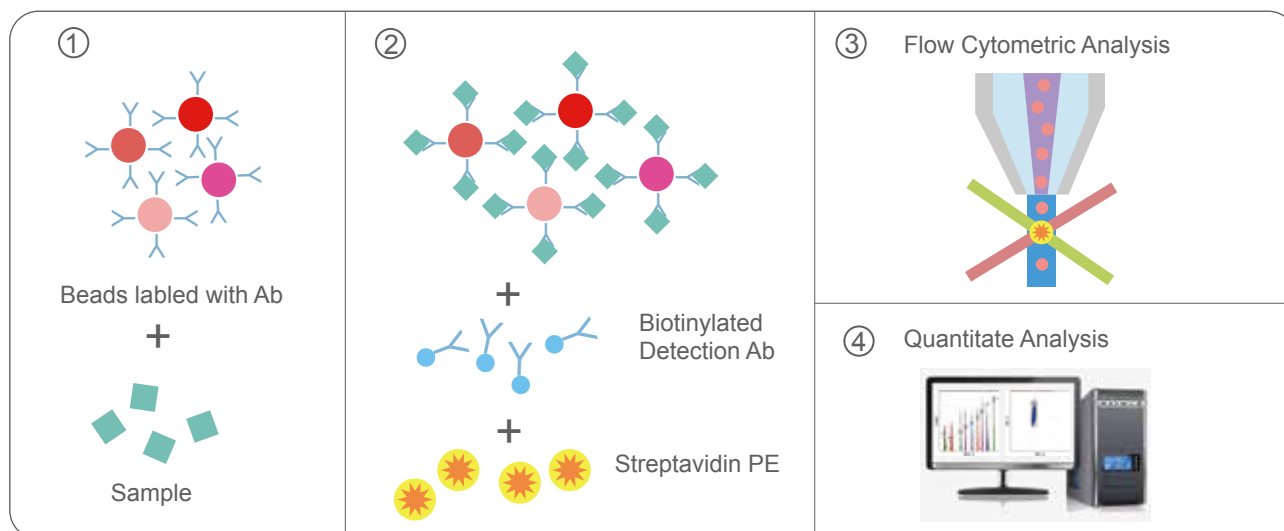


18 independent fluorescent components can be detected by flow cytometer and the CV of fluorescence intensity is small.

## Features

- The set of microspheres has up to 9 independent fluorescent components per particle size, and the CV is small, which can improve detection accuracy.
- Sufficient surface groups: higher protein binding capacity to improve the detection sensitivity.
- Multiple detections: a variety of magnetic microspheres can simultaneously detect various detection substances in the sample with high detection efficiency.
- The superparamagnetic microspheres with uniform particle size, suitable for automated detection platform.

## Detection Process



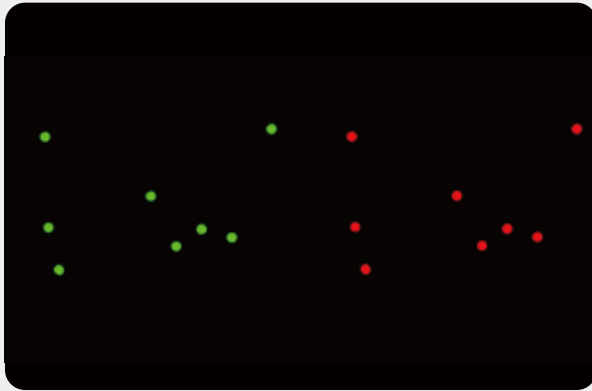
## Ordering Information

	Cat.No.		Concentration	Fluorescent Intensity	Size
5μm	/	4μm			
MFB100501A	MFB100401A		1.2x10 <sup>8</sup> Count/mL	~800W	1mL, 10mL
MFB100505A	MFB100402A		1.2x10 <sup>8</sup> Count/mL	~400W	1mL, 10mL
MFB100507A	MFB100403A		1.2x10 <sup>8</sup> Count/mL	~200W	1mL, 10mL
MFB100508A	MFB100404A		1.2x10 <sup>8</sup> Count/mL	~100W	1mL, 10mL
MFB100513A	MFB100405A		1.2x10 <sup>8</sup> Count/mL	~50W	1mL, 10mL
MFB100516A	MFB100406A		1.2x10 <sup>8</sup> Count/mL	~25W	1mL, 10mL
MFB100517A	MFB100407A		1.2x10 <sup>8</sup> Count/mL	~10W	1mL, 10mL
MFB100518A	MFB100408A		1.2x10 <sup>8</sup> Count/mL	~5W	1mL, 10mL
MFB100519A	MFB100409A		1.2x10 <sup>8</sup> Count/mL	~2W	1mL, 10mL

## Absolute Counting Microspheres

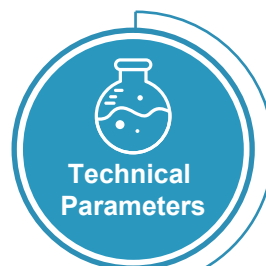
Absolute counting microspheres are developed for absolute counting of cells or other particles by flow cytometry and cell counters. Absolute counts of cells or other particles are determined by comparing the number of cells (or other particles) to the number of microspheres.

We offer multiple products for cell counting--non-fluorescent series (FC) and fluorescent series (FM). The non-fluorescent microspheres are blank carboxylated polystyrene microspheres applying to single population cells or particles counting. And the fluorescent microspheres are carboxylated polystyrene microspheres with various combinations of internal fluorescent dyes (FITC, PE, APC), suitable for different labeled cell classification and absolute counting.



### Features

- Highly homogeneous particle size and fluorescence intensity enhance counting accuracy.
- Single platform testing guarantees counting reliability.
- Easy-to-use and suitable for multiple cell types.



### Technical Parameters

- **Composition:** polystyrene microparticles / fluorescent dyed polystyrene microparticles
- **Concentration:**  $2.0 \times 10^7$  Count/mL
- **Density:** 1.05g/cm<sup>3</sup>
- **Fluorescent Channels :** Tri-color fluorescence (FITC, PE, APC) ; Bi-color fluorescence (FITC, PE)
- **Uniformity:** CV<5%
- **Dispersion Medium:** DI water
- **Additive:** Contains trace amount of surfactant and preservatives
- **Storage Condition:** Store at 2-25 °C , do not freeze

## Ordering Information

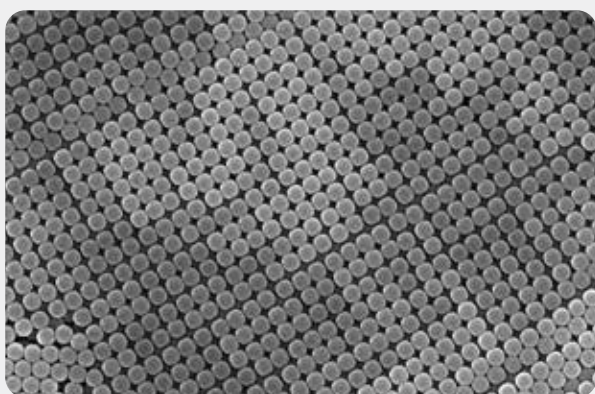
Cat.No.	Particle Size	Description	Concentration	Size
FM1004CTA	4µm	Tri-color fluorescent (FITC, PE, APC)	2x10 <sup>7</sup> Count/mL	1mL, 10mL
FM1005CTA	5µm	Tri-color fluorescent (FITC, PE, APC)	2x10 <sup>7</sup> Count/mL	1mL, 10mL
FM1004CDA	4µm	Bi-color fluorescent (FITC, PE)	2x10 <sup>7</sup> Count/mL	1mL, 10mL
FM1005CDA	5µm	Bi-color fluorescent (FITC, PE)	2x10 <sup>7</sup> Count/mL	1mL, 10mL
FC1004CA	4µm	Blank	2x10 <sup>7</sup> Count/mL	1mL, 10mL
FC1005CA	5µm	Blank	2x10 <sup>7</sup> Count/mL	1mL, 10mL

Other specifications can be customized according to customers' requirements.



# Size Standard Microspheres

Size standard microspheres are a series of solutions containing polymer microspheres. The calibrated average particle size is traceable to the standard ruler and standard microspheres through the US National Institute of Standards and Technology (NIST). The size standard microspheres are verified by a series of particle size analyzers, including photon correlation spectrometer (PCS), disc centrifugal photometer (DCP), tunable resistance pulse sensing (TRPS), nanoparticle tracking analysis (NTA), or laser diffraction (LD), etc. The particle size of our standard microspheres ranges from 100nm to 10 $\mu$ m, which can be used to calibrate and monitor the instrument in a wide range.



- **Composition:** Polystyrene polymer
- **Particle Size:** 100nm-10 $\mu$ m
- **Density:** 1.05g/cm<sup>3</sup>
- **Dispersion Medium:** DI water
- **Particle Refractive Index:** 1.59 (589nm wavelength, 25°C)
- **Uniformity:** CV<3%
- **Additive:** Trace amount of surfactant
- **Storage Condition:** Store at 2-25°C, do not freeze



- Particle size analyzer calibration/quality control
- Light scattering research
- Glial system research
- Self-assembled monolayer
- Photonic crystal research

## Ordering Information

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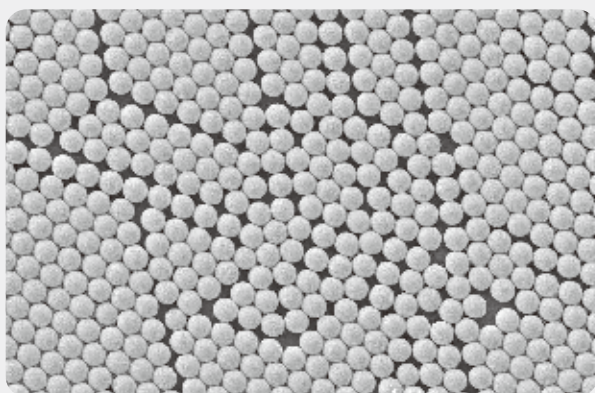
### Size Standard Microspheres

Cat. No.	Particle Size	Particle Size Level	Solids	Size
30100	100nm	Nanoscale	1.0%	15ml
30200	200nm	Nanoscale	1.0%	15ml
30300	300nm	Nanoscale	1.0%	15ml
30400	400nm	Nanoscale	1.0%	15ml
30500	500nm	Nanoscale	1.0%	15ml
30600	600nm	Nanoscale	1.0%	15ml
30700	700nm	Nanoscale	1.0%	15ml
30800	800nm	Nanoscale	1.0%	15ml
30900	900nm	Nanoscale	1.0%	15ml
31001	1 $\mu$ m	Micron	1.0%	15ml
31002	2 $\mu$ m	Micron	1.0%	15ml
31003	3 $\mu$ m	Micron	1.0%	15ml
31004	4 $\mu$ m	Micron	1.0%	15ml
31005	5 $\mu$ m	Micron	1.0%	15ml
31006	6 $\mu$ m	Micron	1.0%	15ml
31007	7 $\mu$ m	Micron	1.0%	15ml
31008	8 $\mu$ m	Micron	1.0%	15ml
31009	9 $\mu$ m	Micron	1.0%	15ml
31010	10 $\mu$ m	Micron	1.0%	15ml

Other specifications can be customized according to customers' requirements.

# Counting Standard Microspheres

The counting standard microspheres are designed for the development, calibration and verification of particle counting equipment. When there are problems with the instruments or during routine maintenance, this series of microspheres can be used to verify and calibrate the instruments to ensure normal operation and correct data output. This series of products strictly abide by the measurement procedures provided by the US National Bureau of Standards Technology (NIST), and are highly NIST traceable. It can meet traceable compliance requirements such as ISO 9001, ISO 10012, ANSI/NCSL-Z540 and GMP/GLP. Through strict resuspension procedures and particle counting detection, the microsphere suspension with accurate particle number can be obtained, which is an indispensable tool for calibrating particle counting instruments.



- **Composition:** Polystyrene polymer
- **Particle Size:** 1 $\mu$ m -10 $\mu$ m
- **Density:** 1.05g/cm<sup>3</sup>
- **Dispersion Medium:** DI water
- **Particle Refractive Index:** 1.59 (589nm wavelength, 25°C)
- **Uniformity:** CV<3%
- **Additive:** Trace amount of surfactant
- **Storage Condition:** Store at 2-25°C, do not freeze



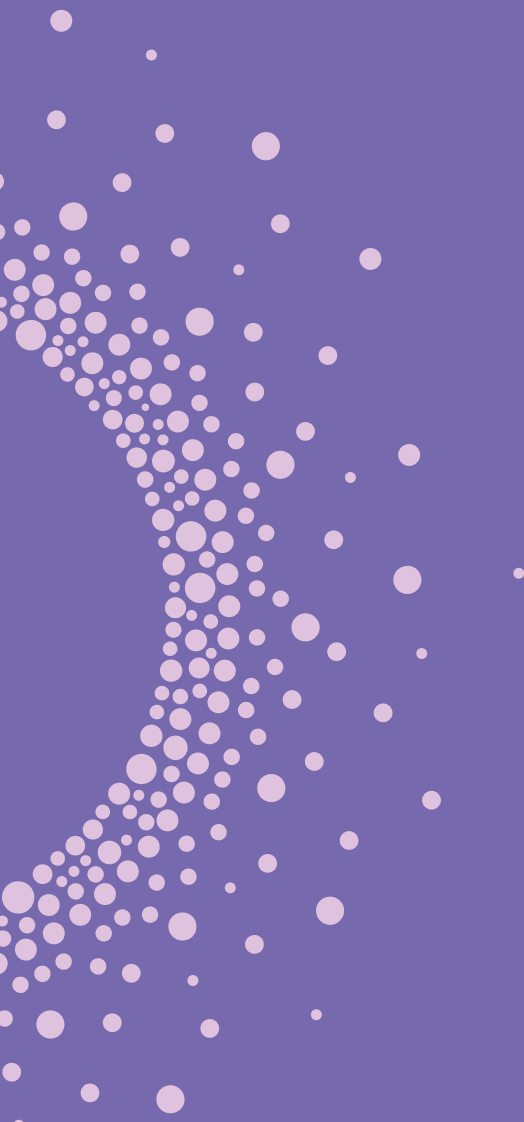
- Calibration of microsphere counting instrument
- Drug counting
- Water quality monitoring
- Low concentration liquid counting

## Ordering Information

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Cat. No.	Nominal Diameter	Approximate	Size
41001	1µm	10 <sup>7</sup> beads/ml	15ml
41002	2µm	10 <sup>7</sup> beads/ml	15ml
41003	3µm	10 <sup>7</sup> beads/ml	15ml
41004	4µm	10 <sup>7</sup> beads/ml	15ml
41005	5µm	10 <sup>7</sup> beads/ml	15ml
41006	6µm	10 <sup>7</sup> beads/ml	15ml
41007	7µm	10 <sup>7</sup> beads/ml	15ml
41008	8µm	10 <sup>7</sup> beads/ml	15ml
41009	9µm	10 <sup>7</sup> beads/ml	15ml
41010	10µm	10 <sup>7</sup> beads/ml	15ml

We provide customized drug counting microspheres, water quality monitoring microspheres, low concentration counting microspheres according to customers' requirements.



# Chromatography Resins

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## Biomacromolecule Purification Resins

# 01

### Coarse purification



Quickly remove large amount of impurities and substances that affect the stability of the target protein, capture the concentrated target protein, and reduce the sample volume. Choose a purification method with high throughput and large capacity, such as salt precipitation and various high-flow-rate and high-capacity resins.

# 02

### Medium purification



Remove most impurities, further concentrate and purify the sample. Choose high-capacity and high-resolution purification methods, such as various high-flow-rate and high-resolution chromatography resins.

# 03

### Fine purification



Remove the small amount of remaining impurities to achieve the desired purification purpose. As the value of samples increases, purification methods with high recovery and high resolution are recommended at this stage, such as various high-recovery, high-resolution chromatography resins.

#### Recombinant protein

Ni Focurose FF(IDA/IMAC/TED), GST Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Phenyl Focurose FF, Focurose 75PG/200PG

#### Natural protein

SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Phenyl Focurose FF, Focurose 75PG/200PG

#### Vaccine, virus

Focurose 4FF, Focurose 30PG/75PG/200PG, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL, Focore 400/700

#### Diagnostic antibody antigen

arProtein A Focurose HR, Protein G Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL

#### Therapeutic antibody

arProtein A Focurose HR, Protein G Focurose 4FF, SP/Q/CM/DEAE/MMA/MMC Focurose FF/HP/HF/HPR/XL

#### Plasmid DNA purification

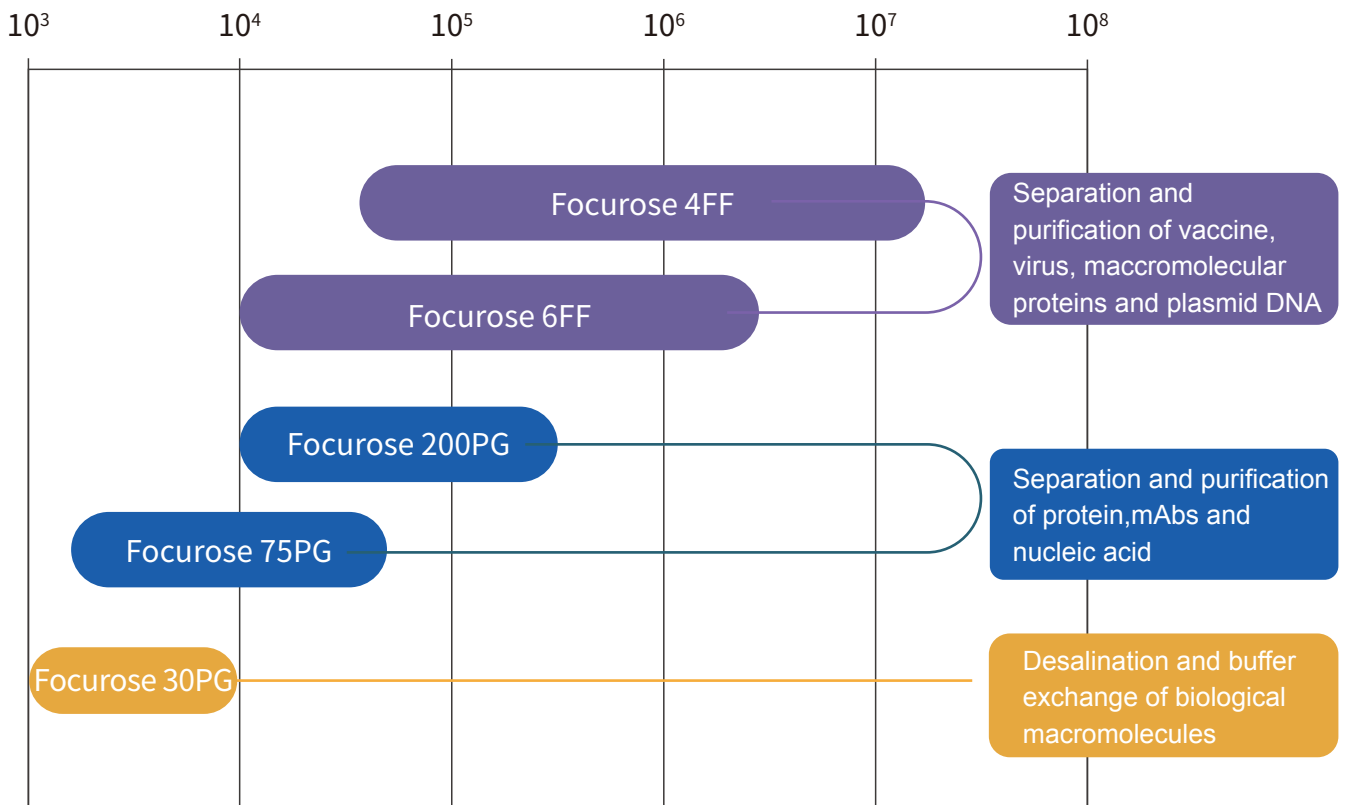
Focurose 6FF, Plasmid Focurose HPR, Q Focurose HPR, Phenyl Focurose FF, Focore 700

#### Desalination

Focurose 30PG

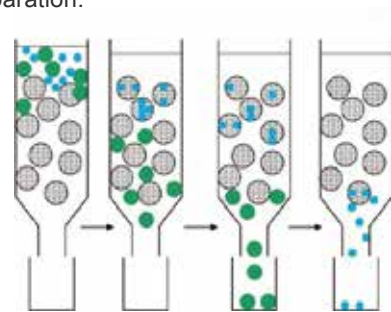
## Size Exclusion Resins

Size exclusion resins graded separation range (globulin Da)



Size exclusion resins are based on the size of the target molecules, from the largest to the smallest peak in order to achieve the purpose of separation.

- ★ Size exclusion resins are often used in the subsequent purification stage with less impurities.
- ★ Size exclusion resins are used for the purification of smaller samples.
- ★ In group separation (such as desalination) can also be used in the coarse purification stage.
- ★ The addition of 150 mM NaCl to the buffer can effectively reduce the non-specific adsorption of the target protein.



## Product List of Size Exclusion Resins

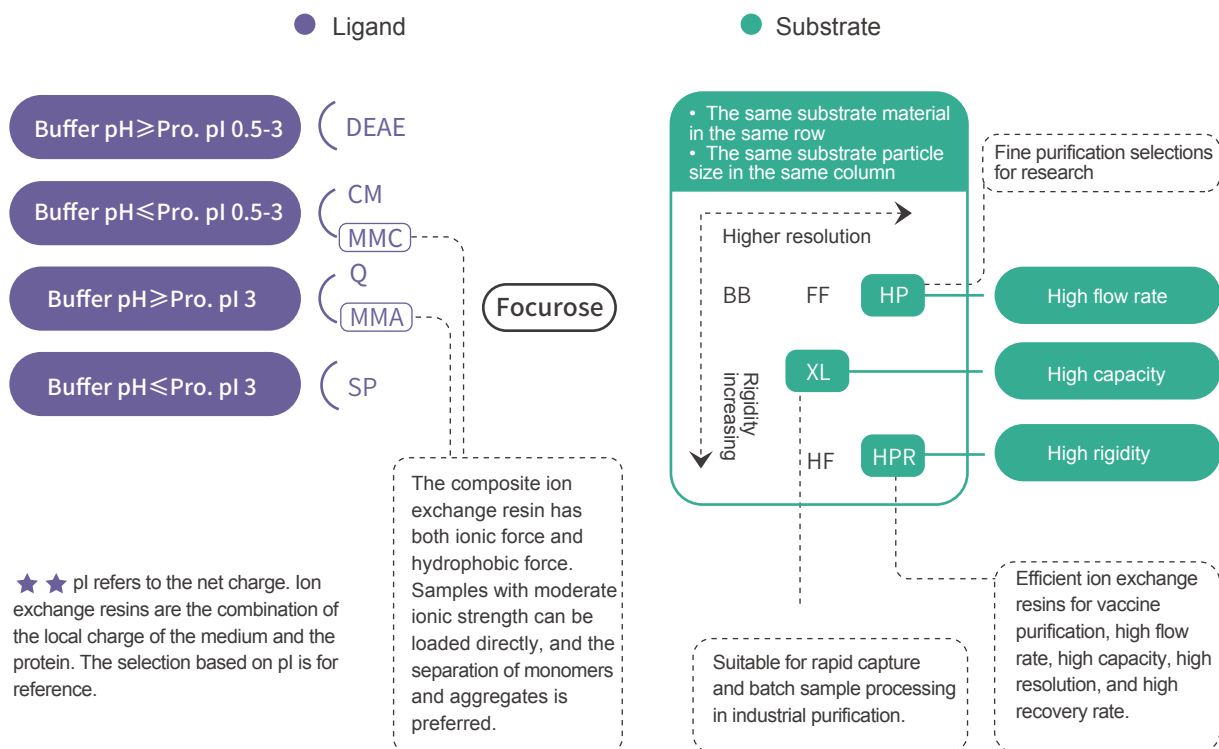
### Sepharose of size exclusion resins

Product Name	Separation Range (globulin)	Particle Size Range	Average Particle Size	Withstand Pressure	Flow Rate	PH Stability	Application
Focurose 4FF	$6 \times 10^4$ - $2 \times 10^7$	45-165 $\mu$ m	90 $\pm$ 5 $\mu$ m	$\leq$ 0.1MPa	250cm/h	[2-12]long-term [2-14]short-term	Isolation of biological macromolecules such as vaccines, viruses, etc.
Focurose 6FF	$1 \times 10^4$ - $4 \times 10^6$	45-165 $\mu$ m	90 $\pm$ 5 $\mu$ m	$\leq$ 0.1MPa	300cm/h	[2-12]long-term [2-14]short-term	Isolation of biological macromolecules such as plasmid DNA, viruses, vaccines, etc.
Focurose 30PG	$\leq 1 \times 10^4$	25-45 $\mu$ m	35 $\pm$ 5 $\mu$ m	$\leq$ 0.3MPa	90cm/h	[3-12]long-term [1-14]short-term	Biomolecule desalination, peptide isolation
Focurose 75PG	$3 \times 10^3$ - $7 \times 10^4$	25-45 $\mu$ m	35 $\pm$ 5 $\mu$ m	$\leq$ 0.3MPa	90cm/h	[3-12]long-term [1-14]short-term	Isolation and purification of peptides and low molecular proteins
Focurose 200PG	$1 \times 10^4$ - $6 \times 10^5$	25-45 $\mu$ m	35 $\pm$ 5 $\mu$ m	$\leq$ 0.3MPa	90cm/h	[3-12]long-term [1-14]short-term	Isolation and purification of monoclonal antibodies and proteins



# Ion Exchange Resins

## Ion Exchange Resins Selection Guide



## Ion Exchange Resins Product List

### Sepharose-based ion exchange resins with high flow rate

Product Name	Ion Loading	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
SP Focurose BB	180-250 H <sup>+</sup> μmol/mL	100-300 μm	1800cm/h	≤0.3MPa	[4-13]long-term [3-14]short-term	High flow rate, high viscosity resistance
SP Focurose FF	180-250 H <sup>+</sup> μmol/mL	45-165 μm	700cm/h	≤0.3MPa	[4-13]long-term [3-14]short-term	Fast, high throughput purification
SP Focurose HP	150-200 H <sup>+</sup> μmol/mL	25-45 μm	150cm/h	≤0.3MPa	[4-13]long-term [3-14]short-term	High resolution
CM Focurose FF	90-130 H <sup>+</sup> μmol/mL	45-165 μm	700cm/h	≤0.3MPa	[4-13]long-term [2-14]short-term	Fast, high throughput purification

Product Name	Ion Loading	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
Q Focurose BB	180-250 Cl <sup>-</sup> μmol/mL	100-300μm	1800cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High flow rate, high viscosity resistance
Q Focurose FF	180-250 Cl <sup>-</sup> μmol/mL	45-165μm	700cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	Fast, high-throughput purification
Q Focurose HP	140-200 Cl <sup>-</sup> μmol/mL	25-45μm	150cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High resolution
DEAE Focurose FF	110-160 Cl <sup>-</sup> μmol/mL	45-165μm	700cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	Fast, high throughput purification

#### Sepharose-based ion exchange resins with ultra-high loading capacity

Product Name	Ion Loading	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
SP Focurose XL	180-250 H <sup>+</sup> μmol/mL	45-165μm	500cm/h	≤0.3MPa	[4-13]long-term [3-14]short-term	High load capacity, high flow rate
Q Focurose XL	180-250 Cl <sup>-</sup> μmol/mL	45-165μm	500cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High load capacity, high flow rate
DEAE Focurose XL	200-400 Cl <sup>-</sup> μmol/mL	45-165μm	500cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High load capacity, high flow rate

## Sepharose-based ion exchange resins with high rigidity

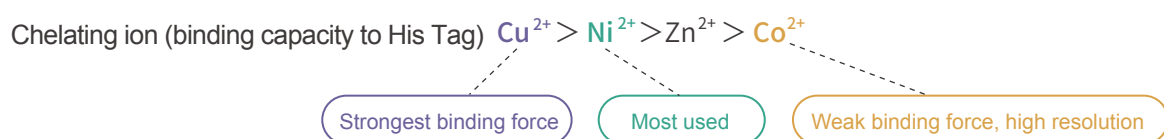
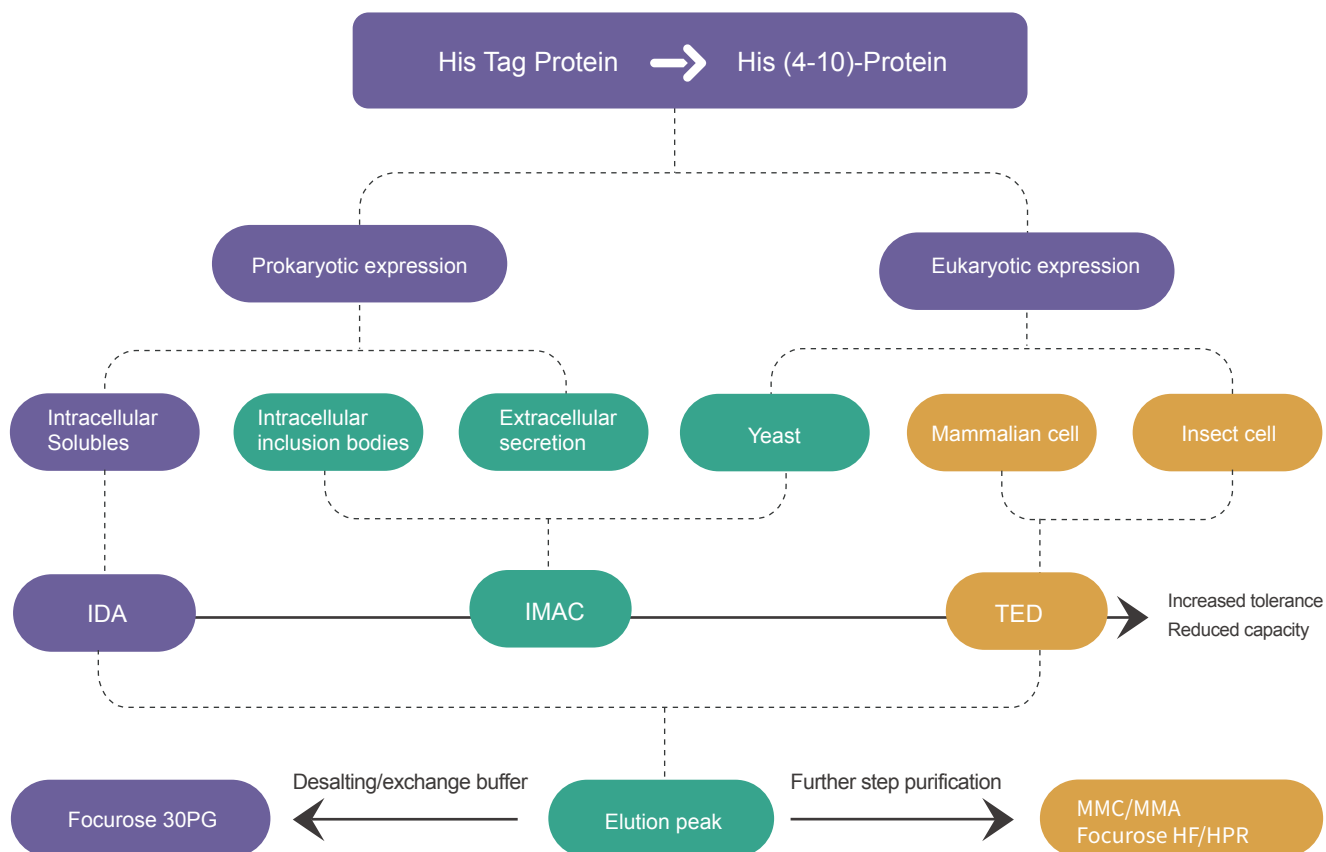
Product Name	Ion Loading	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
SP Focurose HF	120-160 H <sup>+</sup> μmol/mL	45-165μm	700cm/h	≤0.3MPa	[4-12]long-term [3-14]short-term	High flow rate, high throughput; increased efficiency for mass production
SP Focurose HR	120-160 H <sup>+</sup> μmol/mL	25-45μm	400cm/h	≤0.3MPa	[4-12]long-term [3-14]short-term	High flow rate, high throughput; increased efficiency for mass production
SP Focurose HPR	100-140 H <sup>+</sup> μmol/mL	45-165μm	400cm/h	≤0.3MPa	[4-12]long-term [3-14]short-term	High flow rate, high throughput, high resolution, high recovery
Q Focurose HF	160-220 Cl <sup>-</sup> μmol/mL	45-165μm	700cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High flow rate, high throughput; increased efficiency for mass production
Q Focurose HPR	130-160 Cl <sup>-</sup> μmol/mL	25-45μm	400cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High flow rate, high throughput, high resolution, high recovery
DEAE Focurose HF	290-350 Cl <sup>-</sup> μmol/mL	45-165μm	700cm/h	≤0.3MPa	[2-12]long-term [2-14]short-term	High flow rate, high throughput; increased efficiency for mass production

## Sepharose-based ion exchange resins with macroporous structure and high rigidity

Product Name	Ion Loading	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
SP Focurose HPL	70-120 H <sup>+</sup> μmol/mL	45-165μm	300cm/h	≤0.3MPa	[4-11]long-term [2-13]short-term	Isolation and purification of biomolecules, such as PEG-proteins, VLPs and viruses.
Q Focurose HPL	70-100 Cl <sup>-</sup> μmol/mL	45-165μm	300cm/h	≤0.3MPa	[3-10]long-term [1-12]short-term	Isolation and purification of biomolecules, such as PEG-proteins, VLPs and viruses.
DEAE Focurose HPL	70-110 Cl <sup>-</sup> μmol/mL	45-165μm	300cm/h	≤0.3MPa	[2-13]long-term [1-14]short-term	Isolation and purification of biomolecules, such as PEG-proteins, VLPs and viruses.

# Affinity Resins

## Selection Guide for His Tag Protein Purification Affinity Resins



## Affinity Resins Product List

His tag protein purification affinity resins (divided into IDA, IMAC, and TED according to different chelating methods)

Product Name	Load per /mL	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
Ni Focurose FF (IDA)	≥30mg His-tagged proteins	45-165μm	370cm/h	≤0.3MPa	[3-12]long-term [2-14]short-term	Purification of His-tagged proteins
Ni Focurose FF (IMAC)	≥40mg His-tagged proteins	45-165μm	250-400cm/h	≤0.3MPa	[3-12]long-term [2-14]short-term	Large-scale purification of His-tagged proteins

Product Name	Load per /mL	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
Ni Focurose HP (IMAC)	≥40mg His-tagged proteins	25-45μm	<150cm/h	≤0.3MPa	[3-12]long-term [2-14]short-term	Large-scale purification of His-tagged proteins
Ni Focurose FF (TED)	≥10mg His-tagged proteins	45-165μm	600cm/h	≤0.3MPa	[3-12]long-term [2-14]short-term	Resistant to 100mM EDTA and 10mM DTT, direct 1M NaOH thorough cleaning without nickel removal.

In addition to the above products, His tag protein purification media for other substrates such as HPL or HP can be customized.

### GST tag protein purification affinity resins

Product Name	Load per /mL	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
GST Focurose 4FF	≥20mg GST-tagged proteins	45-165μm	450cm/h	≤0.3MPa	[3-12]long-term [3-12]short-term	Purification of GST-tagged proteins

### Affinity resins for antibody purification

Product Name	Load per /mL	Particle Size range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
arProtein A Focurose HR	~60mg human IgG	45-165μm	500cm/h	≤0.5MPa	[3-12]long-term [2-14]short-term	Purified antibodies, immunoglobulin and FC fusion fused proteins. Tolerant to 0.5 M NaOH for CIP
Protein G Focurose 4FF	≥20mg human IgG	45-165μm	400cm/h	≤0.3MPa	[3-9]long-term [2-10]short-term	One-step purification multi-species source antibodies

### Affinity resins for serine protease purification

Product Name	Load per /mL	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
Benzamidine Focurose FF(LS)	10~20mg trypsin	45-165μm	75cm/h	≤0.3MPa	[2-8]long-term [1-9]short-term	Serine protease inhibitor for the purification of serine proteases, trypsin and trypsin-like proteases, etc.
Benzamidine Focurose 4FF(HS)	≥30mg trypsin	45-165μm	300cm/h	≤0.3MPa	[2-8]long-term [1-9]short-term	Serine protease inhibitor that binds exclusively to serine proteases, trypsin and trypsin-like proteases.

## Affinity Resins for Plasmid DNA Purification

Product Name	Load per /mL	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
Plasmid Focurose HPR	≥2mg Superhelical plasmid	25-45μm	200cm/h	≤0.5MPa	[3-13]long-term [2-14]short-term	Superhelical plasmid of DNA purification

## Affinity Resins for Pre-activation Resins

Pre-activation resins, also known as affinity resin activation intermediates, are based on various cross-linked strength agarose, bonded with different active groups (active spacer arms) by different coupling methods. The active groups can be further coupled with various ligands for the preparation of other resins (mainly affinity resins) and fixation of the corresponding substances, and users can easily couple the ligands to be coupled according to their needs, avoiding the tedious process of connecting active groups in the first stage.

Product Name	Ligand Coupling Volume /1mL Medial	Particle Size Range	Maximum Flow Rate	Withstand Pressure	PH Stability	Euclidean Functional Group	Application Characteristics
CNBr Focurose 4FF	≥20mg (Trypsin)	45-165μm	≤0.3cm/h	700MPa	[3-11]long-term [2-11]short-term	-NH <sub>2</sub>	Commonly used for coupling amino-containing macromolecules
Epoxy Focurose 4FF	≥10μmol Epoxy groups	45-165μm	≤0.3cm/h	75MPa	[2-14]long-term [2-14]short-term	-NH <sub>2</sub> -OH,-SH	Wide application and mild coupling conditions

## Hydrophobic Interaction Resins

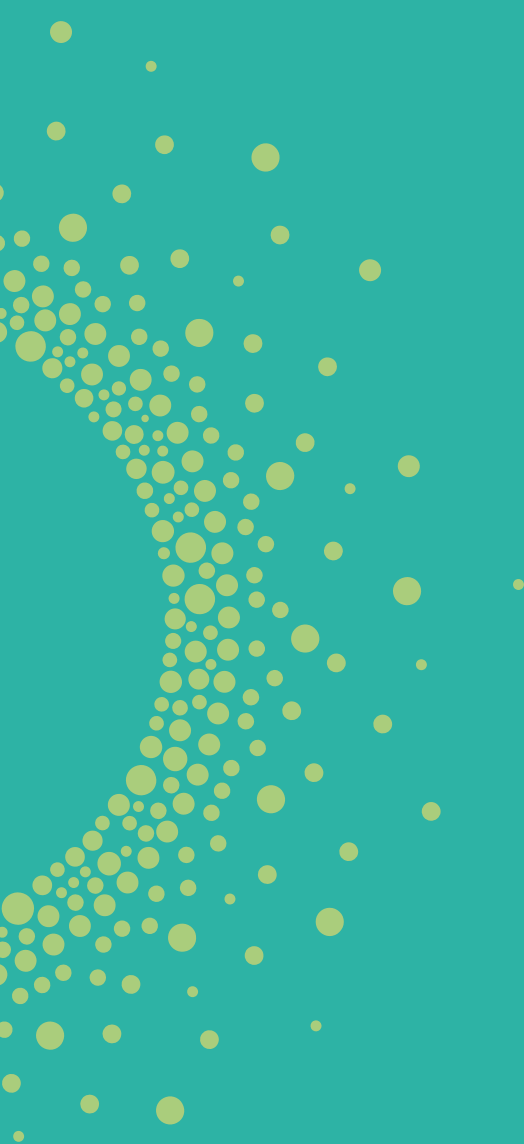
### Hydrophobic Interaction Resins Product List

Product Name	Ligand Concentration	Particle Size Range	Maximum Flow rate	Withstand Pressure	PH Stability	Application Characteristics
Phenyl Focurose FF (LS)	20µmol/ml	45-165µm	400cm/h	≤0.3MPa	[3-13](Long term) [2-14](Short term)	Suitable for aromatic-containing aromatic ligands proteins
Phenyl Focurose FF (HS)	40µmol/ml	45-165µm	400cm/h	≤0.3MPa	[3-13](Long term) [2-14](Short term)	High hydrophobicity and high loading capacity, suitable for aromatic ligands biomolecules
Phenyl Focurose HP	25µmol/ml	25- 45µm	150cm/h	≤0.3MPa	[3-13](Long term) [2-14](Short term)	Fine separation
Butyl Focurose 4FF	40µmol/ml	45-165µm	400cm/h	≤0.3MPa	[3-13](Long term) [2-14](Short term)	Medium hydrophobicity etc., suitable for lipid-containing ligands biological molecules
Butyl Focurose HP	50µmol/ml	25-45µm	150cm/h	≤0.3MPa	[3-13](Long term) [2-14](Short term)	Fine separation

## Multimodal Resins

### Multimodal Resins Product List

Product Name	Ion Loading	Average Particle Size	Maximum Flow Rate	Withstand Pressure	PH Stability	Application Characteristics
MMA Focurose HF	45-165µmol/ml	90±5µm	700cm/h	≤0.5MPa	[4-12](Long term) [2-14](Short term)	Medium/fine purification, removal of dimers, multimers, host cell proteins, nucleic acids, etc.
MMA Focurose HR	45-165µmol/ml	75±5µm	600cm/h	≤0.5MPa	[4-12](Long term) [2-14](Short term)	Medium/fine purification, removal of dimers, multimers, host cell proteins, nucleic acids, etc.
MMC Focurose HF	45- 165µmol/ml	90±5µm	700cm/h	≤0.5MPa	[4-12](Long term) [2-14](Short term)	Medium purification and fine purification of all charged biomolecules such as proteins, peptides, nucleic acids, etc.
Focore 700	45-165µmol/ml	90±5µm	500cm/h	≤0.2MPa	[3-13](Long term) [2-14](Short term)	Isolation and purification of viruses, virus-like particles, viral vectors, etc. in flow-through mode
Focore 400	45-165µmol/ml	90±5µm	700cm/h	≤0.2MPa	[3-13](Long term) [3-14](Short term)	Isolation and purification of viruses, virus-like particles, viral vectors, etc. in flow-through mode



# Antibodies for Flow Cytometry

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## Antibodies for Flow Cytometry

VDO Biotech provide flow cytometry solution both in device and reagents. We can offer flow cytometer, flow antibodies and kits in research and diagnostic applications. Subsidiary company QuantoBio develops world-class antibodies and reagents for flow cytometry. VDO QuantoBio own popular HI clone CD markers technical right, many companies are marketing our CD markers, the clones are original from us. With more than 30 years' experience in monoclonal antibody production, we offer high quality flow cytometry antibodies and reagents in regular size, bulk material production and OEM service. The company has the ISO 9001 and ISO13485:2016 certification. As the manufacturer and clone owner, VDO QuantoBio guarantees long-term delivery of products with firm quality and good batch-to-batch consistency. We aim to provide multiple choices with high quality and affordable price to the customers, along with superior customer service and technical support.



- Provide flow cytometry solution both in device and reagents.
- Own popular HI clone CD markers technical right.
- Flow antibodies and kits used in research and diagnostic applications.
- Multiple Fluorophores for flow cytometry.

### VDO Biotech offers antibody reagents conjugated to a large variety of fluorophores

Lasers	VDO Fluorescence	$\lambda$ Ex	$\lambda$ Em	Alternative Fluorescence
405nm Violet	QBV425	405nm	425nm	BV421
	QBV450	405nm	450nm	V450, PB, eFluor450
	QBV500	405nm	500nm	V500, V500-C, BV510, PO
	QBV540	405nm	540nm	KO, BV510
488nm Blue	FITC	488nm	525nm	FITC, BB515
	QBB520	488nm	520nm	AF488, Dylight 488
	PE	488nm	575nm	PE
	QBB560	488nm	560nm	AF532
	PE-QB610	488nm	610nm	PE-CF594, PE-DL594, ECD, PE-dazzle 594
	Percp	488nm	678nm	Percp
	PE-Cy5	488nm	665nm	PE-Cy5
	Percp-Cy5.5	488nm	695nm	Percp-Cy5.5
633nm Red	PE-Cy7	488nm	779nm	PE-Cy7
	APC	633nm	660nm	APC
	APC-QB710	633nm	710nm	APC-AF700, APC-R700
	APC-Cy7	633nm	779nm	APC-Cy7, APC-A750, APC-eFluor780, APC-H7
	QBR670	633nm	670nm	AF647
	QBR710	633nm	710nm	AF700, BB700

## Ordering Information

### Single Color Antibodies

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD1a	A6021	Purified anti-human CD1a	H1149	mouse IgG1	0.1mg
CD1a	A6032	FITC anti-human CD1a	H1149	mouse IgG1	100T
CD1a	A6033	PE anti-human CD1a	H1149	mouse IgG1	100T
CD2	A6041	Purified anti-human CD2	HIT11	mouse IgG1	0.1mg
CD2	B0040	Biotin anti-human CD2	HIT11	mouse IgG1	25ug
CD2	A6052	FITC anti-human CD2	HIT11	mouse IgG1	100T
CD2	A6053	PE anti-human CD2	HIT11	mouse IgG1	100T
CD2	A6055	APC anti-human CD2	HIT11	mouse IgG1	100T
CD3	A6061	Purified anti-human CD3	HIT3a	mouse IgG2a	0.1mg
CD3	A6072	FITC anti-human CD3	HIT3a	mouse IgG2a	100T
CD3	A6073	PE anti-human CD3	HIT3a	mouse IgG2a	100T
CD3	A6075	APC anti-human CD3	HIT3a	mouse IgG2a	100T
CD3	A6076	PE-Cy5 anti-human CD3	HIT3a	mouse IgG2a	100T
CD3	A7021	Purified anti-human CD3	HIT3b	mouse IgG1	0.1mg
CD3	A3711	QB500 anti-human CD3	HIT3b	mouse IgG1	100T
CD3	A3391	QB450 anti-human CD3	HIT3b	mouse IgG1	100T
CD3	A7581	Purified anti-human CD3	UCHT1	mouse IgG1	0.1mg
CD3	B0060	Biotin anti-human CD3	UCHT1	mouse IgG1	25ug
CD3	A7592	FITC anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7593	PE anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7600	PE-Cy7 anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7596	PE-Cy5 anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7595	APC anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7597	APC-Cy7 anti-human CD3	UCHT1	mouse IgG1	100T
CD3	6610008	PerCP anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A8931	PerCP-Cy5.5 anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7991	PE-QB610 anti-human CD3	UCHT1	mouse IgG1	100T
CD3	A7992	QBB560 anti-human CD3	UCHT1	mouse IgG1	100T
CD4	A6081	Purified anti-human CD4	HIT4a	mouse IgG2b	0.1mg
CD4	A6092	FITC anti-human CD4	HIT4a	mouse IgG2b	100T
CD4	A8951	PE-Cy7 anti-human CD4	SK3	mouse IgG1	100T
CD4	A7601	Purified anti-human CD4	RPA-T4	mouse IgG1	0.1mg
CD4	B0100	Biotin anti-human CD4	RPA-T4	mouse IgG1	25ug
CD4	A7602	FITC anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A7603	PE anti-human CD4	RPA-T4	mouse IgG1	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD4	A3155	APC anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A3157	APC-Cy7 anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A0004	Percp-Cy5.5 anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A3631	QB450 anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A3633	PE-QB610 anti-human CD4	RPA-T4	mouse IgG1	100T
CD4	A3156	PE-Cy5 anti-human CD4	RPA-T4	mouse IgG1	100T
CD5	A6101	Purified anti-human CD5	HISM2	mouse IgG1	0.1mg
CD5	A6112	FITC anti-human CD5	HISM2	mouse IgG1	100T
CD5	A6113	PE anti-human CD5	HISM2	mouse IgG1	100T
CD5	A6115	APC anti-human CD5	HISM2	mouse IgG1	100T
CD5	A6117	APC-Cy7 anti-human CD5	HIQB5	mouse IgG1	100T
CD5	A4260	PE-Cy7 anti-human CD5	HIQB5	mouse IgG1	100T
CD5	A9015	APC-QB710 anti-human CD5	HIQB5	mouse IgG1	100T
CD6	A6121	Purified anti-human CD6	HI210	mouse IgG1	0.1mg
CD6	A6132	FITC anti-human CD6	HI210	mouse IgG1	100T
CD6	A6133	PE anti-human CD6	HI210	mouse IgG1	100T
CD7	A6141	Purified anti-human CD7	HIT7	mouse IgG1	0.1mg
CD7	B0200	Biotin anti-human CD7	HIT7	mouse IgG1	25ug
CD7	A6152	FITC anti-human CD7	HIT7	mouse IgG1	100T
CD7	A6153	PE anti-human CD7	HIT7	mouse IgG1	100T
CD7	A6155	APC anti-human CD7	HIT7	mouse IgG1	100T
CD7	A3611	QB450 anti-human CD7	HIT7	mouse IgG1	100T
CD8	A6161	Purified anti-human CD8	HIT8a	mouse IgG1	0.1mg
CD8	B0220	Biotin anti-human CD8	HIT8a	mouse IgG1	25ug
CD8	A6172	FITC anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A6173	PE anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A6180	PE-Cy7 anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A6175	APC anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A6177	APC-Cy7 anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A6174	Percp anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A4174	Percp-Cy5.5 anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A3651	QB450 anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A3652	QBV500 anti-human CD8	HIT8a	mouse IgG1	100T
CD8	A4291	PE-QB610 anti-human CD8	HIT8a	mouse IgG1	100T
CD9	A6181	Purified anti-human CD9	HI9a	mouse IgG1	0.1mg
A6192	A6192	FITC anti-human CD9	HI9a	mouse IgG1	100T
A6193	A6193	PE anti-human CD9	HI9a	mouse IgG1	100T
A6195	A6195	APC anti-human CD9	HI9a	mouse IgG1	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD9	A6197	APC-Cy7 anti-human CD9	HI9a	mouse IgG1	100T
CD9	A3751	Percp-Cy5.5 anti-human CD9	HI9a	mouse IgG1	100T
CD9	A7971	QB450 anti-human CD9	HI9a	mouse IgG1	100T
CD10	A6201	Purified anti-human CD10	HI10a	mouse IgG1	0.1mg
CD10	A6212	FITC anti-human CD10	HI10a	mouse IgG1	100T
CD10	A6213	PE anti-human CD10	HI10a	mouse IgG1	100T
CD10	A6215	APC anti-human CD10	HI10a	mouse IgG1	100T
CD10	A6217	APC-Cy7 anti-human CD10	HI10a	mouse IgG1	100T
CD10	A6220	PE-Cy7 anti-human CD10	HI10a	mouse IgG1	100T
CD10	A8971	QB450 anti-human CD10	HI10a	mouse IgG1	100T
CD11a	A6221	Purified anti-human CD11a	HI111	mouse IgG1	0.1mg
CD11a	A6232	FITC anti-human CD11a	HI111	mouse IgG1	100T
CD11a	A6233	PE anti-human CD11a	HI111	mouse IgG1	100T
CD11b	A6241	Purified anti-human CD11b	HI11b	mouse IgG2b	0.1mg
CD11b	B0300	Biotin anti-human CD11b	HI11b	mouse IgG1	25ug
CD11b	A6252	FITC anti-human CD11b	HI11b	mouse IgG2b	100T
CD11b	A6253	PE anti-human CD11b	HI11b	mouse IgG2b	100T
CD11b	A6255	APC anti-human CD11b	HI11b	mouse IgG2b	100T
CD11b	A3471	QB450 anti-human CD11b	HI11b	mouse IgG2b	100T
CD11b	A6263	PE anti-human CD11b	ICRF44	mouse IgG1	100T
CD11b	A6260	PE-Cy7 anti-human CD11b	ICRF44	mouse IgG1	100T
CD11c	A3415	APC anti-human CD11c	HIQB11c	mouse IgG1	100T
CD11c	A4340	PE-Cy7 anti-human CD11c	HIQB11c	mouse IgG1	100T
CD13	A3001	Purified anti-human CD13	WM15	mouse IgG1	0.1mg
CD13	A3012	FITC anti-human CD13	WM15	mouse IgG1	100T
CD13	A3013	PE anti-human CD13	WM15	mouse IgG1	100T
CD13	A3015	APC anti-human CD13	WM15	mouse IgG1	100T
CD13	A3020	PE-Cy7 anti-human CD13	WM15	mouse IgG1	100T
CD14	A6281	Purified anti-human CD14	HI221	mouse IgM	0.1mg
CD14	B0340	Biotin anti-human CD14	MEM-15	mouse IgG1	25ug
CD14	A3172	FITC anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A3173	PE anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A3180	PE-Cy7 anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A3175	APC anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A3177	APC-Cy7 anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A4011	Percp-Cy5.5 anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A3512	QB450 anti-human CD14	MEM-15	mouse IgG1	100T
CD14	A4173	APC-QB710 anti-human CD14	MEM-15	mouse IgG1	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD15	A6301	Purified anti-human CD15	HI98	mouse IgM	0.1mg
CD15	B0360	Biotin anti-human CD15	HI98	mouse IgM	25ug
CD15	A6312	FITC anti-human CD15	HI98	mouse IgM	100T
CD15	A6313	PE anti-human CD15	HI98	mouse IgM	100T
CD15	A6320	PE-Cy7 anti-human CD15	HI98	mouse IgM	100T
CD15	A6317	APC-Cy7 anti-human CD15	HI98	mouse IgM	100T
CD15	A4271	QB450 anti-human CD15	HIQB98	mouse IgM	100T
CD16	A6321	Purified anti-human CD16	HI16a	mouse IgG1	0.1mg
CD16	B0380	Biotin anti-human CD16	HI16a	mouse IgG1	25ug
CD16	A6332	FITC anti-human CD16	HI16a	mouse IgG1	100T
CD16	A6333	PE anti-human CD16	HI16a	mouse IgG1	100T
CD16	A6340	PE-Cy7 anti-human CD16	HI16a	mouse IgG1	100T
CD16	A8012	QB450 anti-human CD16	HI16a	mouse IgG1	100T
CD16	A6335	APC anti-human CD16	HI16a	mouse IgG1	100T
CD16	A6337	APC-Cy7 anti-human CD16	HI16a	mouse IgG1	100T
CD16	A8011	PE-QB610 anti-human CD16	HI16a	mouse IgG1	100T
CD16	A3035	APC anti-human CD16	3G8	mouse IgG1	100T
CD18	A6341	Purified anti-human CD18	HI18a	mouse IgG1	0.1mg
CD18	A6352	FITC anti-human CD18	HI18a	mouse IgG1	100T
CD18	A6353	PE anti-human CD18	HI18a	mouse IgG1	100T
CD19	A6361	Purified anti-human CD19	HI19a	mouse IgG1	0.1mg
CD19	B0420	Biotin anti-human CD19	HI19a	mouse IgG1	25ug
CD19	A6372	FITC anti-human CD19	HI19a	mouse IgG1	100T
CD19	A6373	PE anti-human CD19	HI19a	mouse IgG1	100T
CD19	A6376	PE-Cy5 anti-human CD19	HI19a	mouse IgG1	100T
CD19	A3851	Percp-Cy5.5 anti-human CD19	HI19a	mouse IgG1	100T
CD19	A6380	PE-Cy7 anti-human CD19	HI19a	mouse IgG1	100T
CD19	A6375	APC anti-human CD19	HI19a	mouse IgG1	100T
CD19	A6377	APC-Cy7 anti-human CD19	HI19a	mouse IgG1	100T
CD20	A7221	Purified anti-human CD20	HI47	mouse IgG3	0.1mg
CD20	A7233	PE anti-human CD20	HI47	mouse IgG3	100T
CD20	A6381	Purified anti-human CD20	HI20a	mouse IgG2a	0.1mg
CD20	A6392	FITC anti-human CD20	HI20a	mouse IgG2a	100T
CD20	A6397	APC-Cy7 anti-human CD20	HI20a	mouse IgG2a	100T
CD20	A4037	APC-Cy7 anti-human CD20	HIQB20	mouse IgG2a	100T
CD20	A4031	Percp-Cy5.5 anti-human CD20	HIQB20	mouse IgG2b	100T
CD21	A6401	Purified anti-human CD21	HI21a	mouse IgG2a	0.1mg
CD21	A6412	FITC anti-human CD21	HI21a	mouse IgG2a	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD22	A6421	Purified anti-human CD22	HIB22	mouse IgG1	0.1mg
CD22	A6432	FITC anti-human CD22	HIB22	mouse IgG1	100T
CD22	A6433	PE anti-human CD22	HIB22	mouse IgG1	100T
CD22	A6435	APC anti-human CD22	HIB22	mouse IgG1	100T
CD22	A4311	QB450 anti-human CD22	HIQB22	mouse IgG1	100T
CD23	A8072	FITC anti-human CD23	HIQB23	mouse IgG1	100T
CD23	A8073	PE anti-human CD23	HIQB23	mouse IgG1	100T
CD23	A8071	Percp-Cy5.5 anti-human CD23	HIQB23	mouse IgG1	100T
CD24	A6461	Purified anti-human CD24	HI45	mouse IgG1	0.1mg
CD24	A6473	PE anti-human CD24	HI45	mouse IgG1	100T
CD25	A6481	Purified anti-human CD25	HI25a	mouse IgG1	0.1mg
CD25	A6492	FITC anti-human CD25	HI25a	mouse IgG1	100T
CD25	A6493	PE anti-human CD25	HI25a	mouse IgG1	100T
CD25	A6500	PE-Cy7 anti-human CD25	HI25a	mouse IgG1	100T
CD25	A6495	APC anti-human CD25	HI25a	mouse IgG1	100T
CD25	A9017	Percp-Cy5.5 anti-human CD25	HI25a	mouse IgG1	100T
CD27	A7840	PE-Cy7 anti-human CD27	HIQB27	mouse IgG1	100T
CD27	A7891	QB700 anti-human CD27	HIQB27	mouse IgG1	100T
CD27	A3233	PE anti-human CD27	O323	mouse IgG1	100T
CD27	A3234	Percp anti-human CD27	O323	mouse IgG1	100T
CD27	A3240	PE-Cy7 anti-human CD27	O323	mouse IgG1	100T
CD27	A3235	APC anti-human CD27	O323	mouse IgG1	100T
CD27	A3237	APC-Cy7 anti-human CD27	O323	mouse IgG1	100T
CD28	A3253	PE anti-human CD28	CD28.2	mouse IgG1	100T
CD28	A3260	PE-Cy7 anti-human CD28	CD28.2	mouse IgG1	100T
CD28	A3255	APC anti-human CD28	CD28.2	mouse IgG1	100T
CD28	A3257	APC-Cy7 anti-human CD28	CD28.2	mouse IgG1	100T
CD28	A4211	QB450 anti-human CD28	CD28.2	mouse IgG1	100T
CD29	A6501	Purified anti-human CD29	HI29a	mouse IgG1	0.1mg
CD29	A6512	FITC anti-human CD29	HI29a	mouse IgG1	100T
CD29	A6513	PE anti-human CD29	HI29a	mouse IgG1	100T
CD31	A9020	PE anti-human CD31	HIQB31	mouse IgG1	100T
CD33	A6521	Purified anti-human CD33	HI33a	mouse IgG2a	0.1mg
CD33	A6532	FITC anti-human CD33	HI33a	mouse IgG2a	100T
CD33	A6533	PE anti-human CD33	HI33a	mouse IgG2a	100T
CD33	A6535	APC anti-human CD33	HI33a	mouse IgG2a	100T
CD33	A4051	Percp-Cy5.5 anti-human CD33	HIQB33a	mouse IgG1	100T
CD33	A7081	Purified anti-human CD33	HIM3-4	mouse IgG1	0.1mg

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD33	A7093	PE anti-human CD33	HIM3-4	mouse IgG1	100T
CD34	A6541	Purified anti-human CD34	4H11	mouse IgG1	0.1mg
CD34	B0640	Biotin anti-human CD34	4H11	mouse IgG1	25ug
CD34	A6552	FITC anti-human CD34	4H11	mouse IgG1	100T
CD34	A6553	PE anti-human CD34	4H11	mouse IgG1	100T
CD34	A6555	APC anti-human CD34	4H11	mouse IgG1	100T
CD34	A6554	Percp anti-human CD34	4H11	mouse IgG1	100T
CD34	6610409	Percp-Cy5.5 anti-human CD34	4H11	mouse IgG1	100T
CD34	A0041	APC-QB710 anti-human CD34	4H11	mouse IgG1	100T
CD36	B1640	Biotin anti-human CD36	HIQB36	mouse IgG1	25ug
CD36	A8032	FITC anti-human CD36	HIQB36	mouse IgG1	100T
CD36	A8035	APC anti-human CD36	HIQB36	mouse IgG1	100T
CD38	A6581	Purified anti-human CD38	HIT2	mouse IgG1	0.1mg
CD38	A6592	FITC anti-human CD38	HIT2	mouse IgG1	100T
CD38	A6593	PE anti-human CD38	HIT2	mouse IgG1	100T
CD38	A6594	Percp anti-human CD38	HIT2	mouse IgG1	100T
CD38	6610697	APC anti-human CD38	HIT2	mouse IgG1	100T
CD38	A6597	APC-Cy7 anti-human CD38	HIT2	mouse IgG1	100T
CD38	A6600	PE-Cy7 anti-human CD38	HIT2	mouse IgG1	100T
CD38	A3811	QB450 anti-human CD38	HIT2	mouse IgG1	100T
CD38	A9016	QBV500 anti-human CD38	HIT2	mouse IgG1	100T
CD38	A7261	Purified anti-human CD38	HI157	mouse IgG2a	0.1mg
CD40	A6601	Purified anti-human CD40	HI40a	mouse IgG2b	0.1mg
CD40	A6612	FITC anti-human CD40	HI40a	mouse IgG2b	100T
CD41	A6621	Purified anti-human CD41	HIP8	mouse IgG1	0.1mg
CD41	A6632	FITC anti-human CD41	HIP8	mouse IgG1	100T
CD41	A6633	PE anti-human CD41	HIP8	mouse IgG1	100T
CD41	A6640	PE-Cy7 anti-human CD41	HIP8	mouse IgG1	100T
CD41	A6634	Percp anti-human CD41	HIP8	mouse IgG1	100T
CD41	A7281	Purified anti-human CD41	HIP2	mouse IgG3	0.1mg
CD42a	A4372	FITC anti-human CD42a	HIQB42a	mouse IgG1	100T
CD42b	A6641	Purified anti-human CD42b	HIP1	mouse IgG1	0.1mg
CD42b	A6652	FITC anti-human CD42b	HIP1	mouse IgG1	100T
CD42b	A6653	PE anti-human CD42b	HIP1	mouse IgG1	100T
CD42b	A6655	APC anti-human CD42b	HIP1	mouse IgG1	100T
CD42b	A6660	PE-Cy7 anti-human CD42b	HIP1	mouse IgG1	100T
CD43	A6661	Purified anti-human CD43	HI165	mouse IgG1	0.1mg
CD44	A6681	Purified anti-human CD44	HI44a	mouse IgG2a	0.1mg

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD44	A6692	FITC anti-human CD44	HI44a	mouse IgG2a	100T
CD44	A6693	PE anti-human CD44	HI44a	mouse IgG2a	100T
CD45	A6701	Purified anti-human CD45	HI30	mouse IgG1	0.1mg
CD45	B0760	Biotin anti-human CD45	HI30	mouse IgG1	25ug
CD45	A6712	FITC anti-human CD45	HI30	mouse IgG1	100T
CD45	A6713	PE anti-human CD45	HI30	mouse IgG1	100T
CD45	A6714	PerCP anti-human CD45	HI30	mouse IgG1	100T
CD45	6610889	Percp-Cy5.5 anti-human CD45	HI30	mouse IgG1	100T
CD45	A6715	APC anti-human CD45	HI30	mouse IgG1	100T
CD45	A6717	APC-Cy7 anti-human CD45	HI30	mouse IgG1	100T
CD45	A6716	PE-Cy5 anti-human CD45	HI30	mouse IgG1	100T
CD45	A6720	PE-Cy7 anti-human CD45	HI30	mouse IgG1	100T
CD45	A3452	QB450 anti-human CD45	HI30	mouse IgG1	100T
CD45	A3450	QB500 anti-human CD45	HI30	mouse IgG1	100T
CD45	A3871	QB540 anti-human CD45	HI30	mouse IgG1	100T
CD45	A3453	PE-QB610 anti-human CD45	HI30	mouse IgG1	100T
CD45	A4131	QB540 anti-human CD45	HIQB30	mouse IgG1	100T
CD45	A7301	Purified anti-human CD45	HI73	mouse IgG2a	0.1mg
CD45	A7321	Purified anti-human CD45	HI151	mouse IgG1	0.1mg
CD45	A7341	Purified anti-human CD45	HI185	mouse IgG1	0.1mg
CD45RA	A6721	Purified anti-human CD45RA	HI100	mouse IgG2b	0.1mg
CD45RA	A6732	FITC anti-human CD45RA	HI100	mouse IgG2b	100T
CD45RA	A6733	PE anti-human CD45RA	HI100	mouse IgG2b	100T
CD45RA	A6740	PE-Cy7 anti-human CD45RA	HI100	mouse IgG2b	100T
CD45RA	A6735	APC anti-human CD45RA	HI100	mouse IgG2b	100T
CD45RA	A6737	APC-Cy7 anti-human CD45RA	HI100	mouse IgG2b	100T
CD45RA	A4351	Percp anti-human CD45RA	HIQB100	mouse IgG2b	100T
CD45RO	A3341	Purified anti-human CD45RO	UCHL1	mouse IgG2a	0.1mg
CD45RO	A3352	FITC anti-human CD45RO	UCHL1	mouse IgG2a	100T
CD45RO	A3353	PE anti-human CD45RO	UCHL1	mouse IgG2a	100T
CD45RO	A3355	APC anti-human CD45RO	UCHL1	mouse IgG2a	100T
CD45RO	A3357	APC-Cy7 anti-human CD45RO	UCHL1	mouse IgG2a	100T
CD47	A7361	Purified anti-human CD47	HIRH47	mouse IgG1	0.1mg
CD47	A7381	Purified anti-human CD47R	HI172	mouse IgG1	0.1mg
CD52	A6741	Purified anti-human CD52	HI186	mouse IgG2a	0.1mg
CD52	A6752	FITC anti-human CD52	HI186	mouse IgG2a	100T
CD53	A6761	Purified anti-human CD53	HI29	mouse IgG1	0.1mg
CD53	A7401	Purified anti-human CD53	HI36	mouse IgG3	0.1mg



CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD55	A6781	Purified anti-human CD55	HI55a	mouse IgG2a	0.1mg
CD55	A6792	FITC anti-human CD55	HI55a	mouse IgG2a	100T
CD55	A6793	PE anti-human CD55	HI55a	mouse IgG2a	100T
CD55	A6795	APC anti-human CD55	HI55a	mouse IgG2a	100T
CD56	A6801	Purified anti-human CD56	B-A19	mouse IgG1	0.1mg
CD56	B0860	Biotin anti-human CD56	B-A19	mouse IgG1	25ug
CD56	A6813	PE anti-human CD56	B-A19	mouse IgG1	100T
CD56	A3560	PE-Cy7 anti-human CD56	B-A19	mouse IgG1	100T
CD56	A6815	APC anti-human CD56	B-A19	mouse IgG1	100T
CD56	A6817	APC-Cy7 anti-human CD56	B-A19	mouse IgG1	100T
CD56	A9013	PE anti-human CD56	3A4	mouse IgG1	100T
CD56	A9019	Percp-Cy5.5 anti-human CD56	3A4	mouse IgG1	100T
CD57	A6821	Purified anti-human CD57	HI57a	mouse IgM	0.1mg
CD57	A6832	FITC anti-human CD57	HI57a	mouse IgM	100T
CD57	A6835	APC anti-human CD57	HI57a	mouse IgM	100T
CD58	A6841	Purified anti-human CD58	HI58a	mouse IgG1	0.1mg
CD58	A6852	FITC anti-human CD58	HI58a	mouse IgG1	100T
CD58	A6853	PE anti-human CD58	HI58a	mouse IgG1	100T
CD59	A6872	FITC anti-human CD59	MEM43/5	mouse IgG2b	100T
CD59	A6873	PE anti-human CD59	MEM43/5	mouse IgG2b	100T
CD61	A7813	PE anti-human CD61	SZ21	mouse IgG1	100T
CD61	B1400	Biotin anti-human CD61	HIP11	mouse IgG1	25ug
CD61	A3932	FITC anti-human CD61	HIP11	mouse IgG1	100T
CD61	A3933	PE anti-human CD61	HIP11	mouse IgG1	100T
CD61	A3934	Percp anti-human CD61	HIP11	mouse IgG1	100T
CD61	A3940	PE-Cy7 anti-human CD61	HIP11	mouse IgG1	100T
CD61	A3937	APC-Cy7 anti-human CD61	HIP11	mouse IgG1	100T
CD62E	A7421	Purified anti-human CD62E	HI62E	mouse IgG2a	0.1mg
CD62L	A6881	Purified anti-human CD62L	HI62L	mouse IgG2a	0.1mg
CD62L	A6893	PE anti-human CD62L	HI62L	mouse IgG2a	100T
CD62L	A6910	PE-Cy7 anti-human CD62L	HI62L	mouse IgG2a	100T
CD62L	A3273	PE anti-human CD62L	MEL-14	mouse IgG2a	100T
CD62L	A3280	PE-Cy7 anti-human CD62L	MEL-14	mouse IgG2a	100T
CD62L	A3275	APC anti-human CD62L	MEL-14	mouse IgG2a	100T
CD62L	A3277	APC-Cy7 anti-human CD62L	MEL-14	mouse IgG2a	100T
CD62P	A6901	Purified anti-human CD62p	HI62P	mouse IgG1	0.1mg
CD62P	A6913	PE anti-human CD62p	HI62P	mouse IgG1	100T
CD62P	A6915	APC anti-human CD62p	HI62P	mouse IgG1	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD63	A8992	FITC anti-human CD63	HIQB63	mouse IgG1	100T
CD63	A8993	PE anti-human CD63	HIQB63	mouse IgG1	100T
CD64	A3041	Purified anti-human CD64	10.1	mouse IgG1	0.1mg
CD64	A3052	FITC anti-human CD64	10.1	mouse IgG1	100T
CD64	A3053	PE anti-human CD64	10.1	mouse IgG1	100T
CD64	A3055	APC anti-human CD64	10.1	mouse IgG1	100T
CD64	A3057	APC-Cy7 anti-human CD64	10.1	mouse IgG1	100T
CD69	A3490	PE anti-human CD69	FN50	mouse IgG1	100T
CD71	A6941	Purified anti-human CD71	HI160	mouse IgG2b	0.1mg
CD71	A7441	Purified anti-human CD71	HI166	mouse IgG1	0.1mg
	B1020	Biotin anti-human CD71	HI166	mouse IgG1	25ug
CD71	A7452	FITC anti-human CD71	HI166	mouse IgG1	100T
CD71	A7453	PE anti-human CD71	HI166	mouse IgG1	100T
CD73	A7112	FITC anti-human CD73	AD2	mouse IgG1	100T
CD73	A7113	PE anti-human CD73	AD2	mouse IgG1	100T
CD73	A7120	PE-Cy7 anti-human CD73	AD2	mouse IgG1	100T
CD79a	A9025	APC anti-human CD79a	HIQB79a	mouse IgG1	100T
CD81	A8052	FITC anti-human CD81	HIQB81	mouse IgG1	100T
CD81	A8053	PE anti-human CD81	HIQB81	mouse IgG1	100T
CD90	A7472	FITC anti-human CD90	5E10	mouse IgG1	100T
CD90	A7473	PE anti-human CD90	5E10	mouse IgG1	100T
CD90	A7475	APC anti-human CD90	5E10	mouse IgG1	100T
CD95	A4115	APC anti-human CD95	HIQB95	mouse IgG1	100T
CD99	A6981	Purified anti-human CD99	HI156	mouse IgG2a	0.1mg
CD99	A6992	FITC anti-human CD99	HI156	mouse IgG2a	100T
CD99R	A7001	Purified anti-human CD99R	HIT4	mouse IgM	0.1mg
CD99R	A7013	PE anti-human CD99R	HIT4	mouse IgM	100T
CD105	A7132	FITC anti-human CD105	MEM-226	mouse IgG2a	100T
CD105	A7133	PE anti-human CD105	MEM-226	mouse IgG2a	100T
CD105	A7135	APC anti-human CD105	MEM-226	mouse IgG2a	100T
CD107a	A4195	APC anti-human CD107a	HIQB107	mouse IgG1	100T
CD117	A3061	Purified anti-human CD117	104D2	mouse IgG1	0.1mg
CD117	A3072	FITC anti-human CD117	104D2	mouse IgG1	100T
CD117	A3073	PE anti-human CD117	104D2	mouse IgG1	100T
CD117	A3080	PE-Cy7 anti-human CD117	104D2	mouse IgG1	100T
CD117	A3075	APC anti-human CD117	104D2	mouse IgG1	100T
CD117	A3077	APC-Cy7 anti-human CD117	104D2	mouse IgG1	100T
CD123	A3561	Purified anti-human CD123	HI12H7	mouse IgG1	0.1mg

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD123	B1120	Biotin anti-human CD123	HI12H7	mouse IgG1	25ug
CD123	A3572	FITC anti-human CD123	HI12H7	mouse IgG1	100T
CD123	A3573	PE anti-human CD123	HI12H7	mouse IgG1	100T
CD123	A3575	APC anti-human CD123	HI12H7	mouse IgG1	100T
CD123	A3153	PE anti-human CD123	6H6	mouse IgG1	100T
CD123	A0018	Percp-Cy5.5 anti-human CD123	6H6	mouse IgG1	100T
CD123	6611097	APC anti-human CD123	6H6	mouse IgG1	100T
CD123	A7721	Purified anti-human CD123	HI8D7	mouse IgG1	0.1mg
CD123	A3575	APC anti-human CD123	HI8D7	mouse IgG1	100T
CD127	A3081	Purified anti-human CD127	A019D5	mouse IgG1	0.1mg
CD127	A3093	PE anti-human CD127	A019D5	mouse IgG1	100T
CD127	A3093	PE-Cy7 anti-human CD127	A019D5	mouse IgG1	100T
CD127	A3095	APC anti-human CD127	A019D5	mouse IgG1	100T
CD138	A3101	Purified anti-human CD138	MI15	mouse IgG1	0.1mg
CD138	B1160	Biotin anti-human CD138	MI15	mouse IgG1	25ug
CD138	A3112	FITC anti-human CD138	MI15	mouse IgG1	100T
CD138	A3113	PE anti-human CD138	MI15	mouse IgG1	100T
CD138	A3120	PE-Cy7 anti-human CD138	MI15	mouse IgG1	100T
CD138	A3115	APC anti-human CD138	MI15	mouse IgG1	100T
CD138	A3892	QB450 anti-human CD138	MI15	mouse IgG1	100T
CD152	A7855	APC anti-human CD152	HIQB152	mouse IgG2a	100T
CD161	A3911	APC-Cy7 anti-human CD161	HIQB161	mouse IgG1	100T
CD197	A4093	PE anti-human CD197	HIQB197	mouse IgG2a	100T
CD197	A4095	APC anti-human CD197	HIQB197	mouse IgG2a	100T
CD200	A9024	PE-Cy7 anti-human CD200	HIQB200	mouse IgG2a	100T
CD223	A8913	PE anti-human CD223	HIQB223	mouse IgG1	100T
CD235a	A7041	Purified anti-human CD235a	HI264	mouse IgG2a	0.1mg
CD235a	A7052	FITC anti-human CD235a	HI264	mouse IgG2a	100T
CD235ab	A7061	Purified anti-human CD235ab	HIR2	mouse IgG2b	0.1mg
CD235ab	B1200	Biotin anti-human CD235ab	HIR2	mouse IgG1	25ug
CD235ab	A7072	FITC anti-human CD235ab	HIR2	mouse IgG2b	100T
CD269	A7561	Purified anti-human CD269	HIBCMA	mouse IgG1	0.1mg
CD269	A7573	PE anti-human CD269	HIBCMA	mouse IgG1	100T
CD273	A7875	APC anti-human CD273	HIQB273-1	mouse IgG1	100T
CD274	A4073	PE anti-human CD274	HIQB274	mouse IgG1	100T
CD274	A4075	APC anti-human CD274	HIQB274	mouse IgG1	100T
CD279(PD-1)	A7521	Purified anti-human CD279	HIQB279-2	mouse IgG1	0.1mg
CD279(PD-1)	A7541	Purified anti-human CD279	HI2E7	mouse IgG1	0.1mg

CD Marker	Catalog Number	Description	Clone	Isotype	Size
CD279(PD-1)	B1240	Biotin anti-human CD279	HI2E7	mouse IgG1	25ug
CD279(PD-1)	A7553	PE anti-human CD279	HI2E7	mouse IgG1	100T
CD279(PD-1)	A3771	PE-Cy7 anti-human CD279	HI2E7	mouse IgG1	100T
CD279(PD-1)	A7555	APC anti-human CD279	HI2E7	mouse IgG1	100T
CD366	A8092	FITC anti-human CD366	HIQB366	mouse IgG1	100T
CD366	A8095	APC anti-human CD366	HIQB366	mouse IgG1	100T
HLA-I	A7141	Purified anti-human HLA-I	HI21	mouse IgG2a	0.1mg
HLA-I	A7152	FITC anti-human HLA-I	HI21	mouse IgG2a	100T
HLA-I	A7153	PE anti-human HLA-I	HI21	mouse IgG2a	100T
HLA-DR	A7161	Purified anti-human HLA-DR	HI43	mouse IgG1	0.1mg
HLA-DR	A7172	FITC anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A7173	PE anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A7180	PE-Cy7 anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A0020	Percp-Cy5.5 anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A7175	APC anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A7177	APC-Cy7 anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A0021	QB450 anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DR	A3791	QB700 anti-human HLA-DR	HI43	mouse IgG1	100T
HLA-DQ	A7101	Purified anti-human HLA-DQ	HI118	mouse IgG1	0.1mg
Lambda Chain	A7241	Purified anti-human Lambda Chain	HIgλ	mouse IgG1	0.1mg
Lambda Chain	A3692	FITC anti-human Lambda Chain	2D54	mouse IgG2a	100T
Lambda Chain	A3691	PE anti-human Lambda Chain	2D54	mouse IgG2a	100T
Lambda Chain	A3697	APC-Cy7 anti-human Lambda Chain	2D54	mouse IgG2a	100T
Lambda Chain	A7911	Percp-Cy5.5 anti-human Lambda Chain	2D54	mouse IgG2a	100T
Kappa Chain	A7741	Purified anti-human Kappa Chain	HIgK	mouse IgG1	0.1mg
Kappa Chain	A3671	FITC anti-human Kappa Chain	2F1C1	mouse IgG1	100T
Kappa Chain	A3673	PE anti-human Kappa Chain	2F1C1	mouse IgG1	100T
Kappa Chain	A3675	APC anti-human Kappa Chain	2F1C1	mouse IgG1	100T
CCR7	A3375	APC anti-human CCR7	G043H7	mouse IgG2a	100T
CCR7	A3368	APC-Cy7 anti-human CCR7	G043H7	mouse IgG2a	100T
FASL	A7513	PE anti-human FASL	NOK-1	mouse IgG1	100T
TCRα/β	A9018	FITC anti-human TCRα/β	HIQBTCR-2	mouse IgG1	100T
TCR Vδ2	A9026	APC anti-human TCR Vδ2	HIQBTCR-3	mouse IgG1	100T
TCRγ/δ	A7613	PE anti-human TCRγ/δ	B1	mouse IgG1	100T
TCRγ/δ	B1740	Biotin anti-human TCRγ/δ	B1	mouse IgG1	25ug
Perforin	A7933	PE anti-human Perforin	HIQBPer	mouse IgG2b	100T
Granzyme B	A7952	FITC anti-human Granzyme B	HIQBGra	mouse IgG1	100T
TdT	A3952	FITC anti-human TdT	HIQBTdT	mouse IgG2a	100T

CD Marker	Catalog Number	Description	Clone	Isotype	Size
TIGIT	A4172	APC anti-human TIGIT	HIQBTIG	mouse IgG2a	100T
TIGIT	A4171	Percp-Cy5.5 anti-human TIGIT	HIQBTIG	mouse IgG2a	100T
MPO	A7792	FITC anti-human MPO	MPO421-8B2	mouse IgG1	100T
MPO	A7793	PE anti-human MPO	MPO421-8B2	mouse IgG1	100T
IgD	A9022	Percp-Cy5.5 anti-human IgD	HIQBIGD	mouse IgG2a	100T
TNF- $\alpha$	A7641	Purified anti-human TNF- $\alpha$	HI2A10	mouse IgG1	0.1mg
TNF- $\alpha$	A3501	Purified anti-human TNF- $\alpha$	HIXB10	mouse IgG2b	0.1mg
IFN- $\gamma$	A3541	Purified anti-human IFN- $\gamma$	HI59F4	mouse IgG1	0.1mg
IFN- $\gamma$	A3521	Purified anti-human IFN- $\gamma$	HI61E7	mouse IgG1	0.1mg
	A3721	Purified CK18	HI2A6P	mouse IgG1	0.1mg
	A3741	Purified CK18	HI3A9B	mouse IgG2a	0.1mg
	A3581	Purified CK19	HI2G2	mouse IgG2b	0.1mg
mouse IgG1	A2201	Isotype Control mouse IgG1 Purified	7D11	mouse IgG1	0.1mg
mouse IgG1	A2212	Isotype Control mouse IgG1 FITC	7D11	mouse IgG1	100T
mouse IgG1	A2213	Isotype Control mouse IgG1 PE	7D11	mouse IgG1	100T
mouse IgG1	A2220	Isotype Control mouse IgG1 PE-Cy7	7D11	mouse IgG1	100T
mouse IgG1	A2215	Isotype Control mouse IgG1 APC	7D11	mouse IgG1	100T
mouse IgG1	A2217	Isotype Control mouse IgG1 APC-Cy7	7D11	mouse IgG1	100T
mouse IgG1	A2214	Isotype Control mouse IgG1 Percp	7D11	mouse IgG1	100T
mouse IgG1	A0016	Isotype Control mouse IgG1 Percp-Cy5.5	7D11	mouse IgG1	100T
mouse IgG1	A9011	Isotype Control mouse IgG1 QBV450	7D11	mouse IgG1	100T
mouse IgG1	A9012	Isotype Control mouse IgG1 QBV500	7D11	mouse IgG1	100T
mouse IgG1	A9014	Isotype Control mouse IgG1 PE-QB610	7D11	mouse IgG1	100T
mouse IgG1	A2261	Isotype Control mouse IgG1 Purified	1F8	mouse IgG1	0.1mg
mouse IgG1	A2272	Isotype Control mouse IgG1 FITC	1F8	mouse IgG1	100T
mouse IgG2a	A2221	Isotype Control mouse IgG2a Purified	X5563	mouse IgG2a	0.1mg
mouse IgG2a	A2232	Isotype Control mouse IgG2a FITC	X5563	mouse IgG2a	100T
mouse IgG2a	A2233	Isotype Control mouse IgG2a PE	X5563	mouse IgG2a	100T
mouse IgG2a	A2240	Isotype Control mouse IgG2a PE-Cy7	X5563	mouse IgG2a	100T
mouse IgG2a	A2235	Isotype Control mouse IgG2a APC	X5563	mouse IgG2a	100T
mouse IgG2a	A2237	Isotype Control mouse IgG2a APC-Cy7	X5563	mouse IgG2a	100T
mouse IgG2b	A2241	Isotype Control mouse IgG2b Purified	TG1.7	mouse IgG2b	0.1mg
mouse IgG2b	A2252	Isotype Control mouse IgG2b FITC	TG1.7	mouse IgG2b	100T
mouse IgG2b	A2253	Isotype Control mouse IgG2b PE	TG1.7	mouse IgG2b	100T
mouse IgG2b	A2254	Isotype Control mouse IgG2b Percp	TG1.7	mouse IgG2b	100T
mouse IgG2b	A2260	Isotype Control mouse IgG2b PE-Cy7	TG1.7	mouse IgG2b	100T
mouse IgG2b	A2257	Isotype Control mouse IgG2b APC-Cy7	TG1.7	mouse IgG2b	100T
mouse IgM	A2281	Isotype Control mouse IgM Purified	HILE6	mouse IgM	0.1mg
mouse IgM	A2292	Isotype Control mouse IgM FITC	HILE6	mouse IgM	100T

## Ordering Information

### Multi Color Reagents and Kits

Product	Component	Usage	Size	Catalog Number
CD3 FITC/CD4 PE/CD45 Percp	/	20ul/Test	100T	B6041
CD4 FITC/CD8 PE/CD3 Percp	/	20ul/Test	100T	B6048
CD3 FITC/CD8 PE/CD45 Percp/ CD4 APC	/	20ul/Test	100T	B6042
CD3 FITC/CD16+56 PE/ CD45 Percp/CD19 APC	/	20ul/Test	100T	B6043
CD3 FITC/CD16+56 PE/ CD45 Percp-Cy5.5/CD4 PE-Cy7/ CD19 APC/CD8 APC-Cy7	/	20ul/Test	100T	B6044
Kappa FITC/Lambda PE	/	20ul/Test	100T	B6026
CD3-FITC/CD19-PE	/	20ul/Test	100T	SM003
CD4 FITC/CD8 PE	/	20ul/Test	100T	B6050
CD16 FITC/CD56 PE	/	20ul/Test	100T	B6049
Annexin V-FITC Apoptosis Kit	Annexin V-FITC	20ul/Test	100T	SM201
	Annexin V Binding Buffer (10×)	500ul/Test		
	7-AAD	20ul/Test		
Annexin V-APC Apoptosis Kit	Annexin V-APC	20ul/Test	100T	SM202
	Annexin V Binding Buffer (10×)	500ul/Test		
	7-AAD	20ul/Test		
Human T-reg Kit	CD4-PE-CY7	10ul/Test	100T	SM203
	CD25-PE	10ul/Test		
	CD127-APC	10ul/Test		
Human MSC Kit	CD73-FITC/CD105-PE	20ul/Test	50T	SM204
	CD45-FITC/HLA-DR-PE	20ul/Test		
	IgG1-FITC/IgG2a-PE	20ul/Test		
	CD90-FITC/CD73-PE-Cy7 / CD105-APC	20ul/Test		
Human MSC Kit (Discovery Version)	CD45-FITC/CD34-PE /HLA-DR-PE-Cy7/CD19-APC /CD14-APC-Cy7	20ul/Test	50T	SM205
	IgG1-FITC/IgG1-PE/IgG1-PE-Cy7 /IgG2a-APC/IgG1-APC-Cy7	20ul/Test	50T	
	7-AAD	20ul/Test	50T	
	CD90-FITC	10ul/Test	50T	
	CD73-PE-Cy7	10ul/Test	10T	
	CD105-APC	10ul/Test	10T	

Human MSC Kit (QC Version)	CD90-FITC/CD73-PE-Cy7 /CD105-APC/CD45-PE /CD34-PE/HLA-DR-PE /CD19-PE/CD14-PE	50T	SM206
	IgG1-FITC/IgG1-PE /IgG1-PE-Cy7/IgG2a-APC /IgG1-APC-Cy7	50T	
	7-AAD	50T	
	CD90-FITC	10T	
	CD73-PE-Cy7	10T	
	CD105-APC	10T	

#### Others

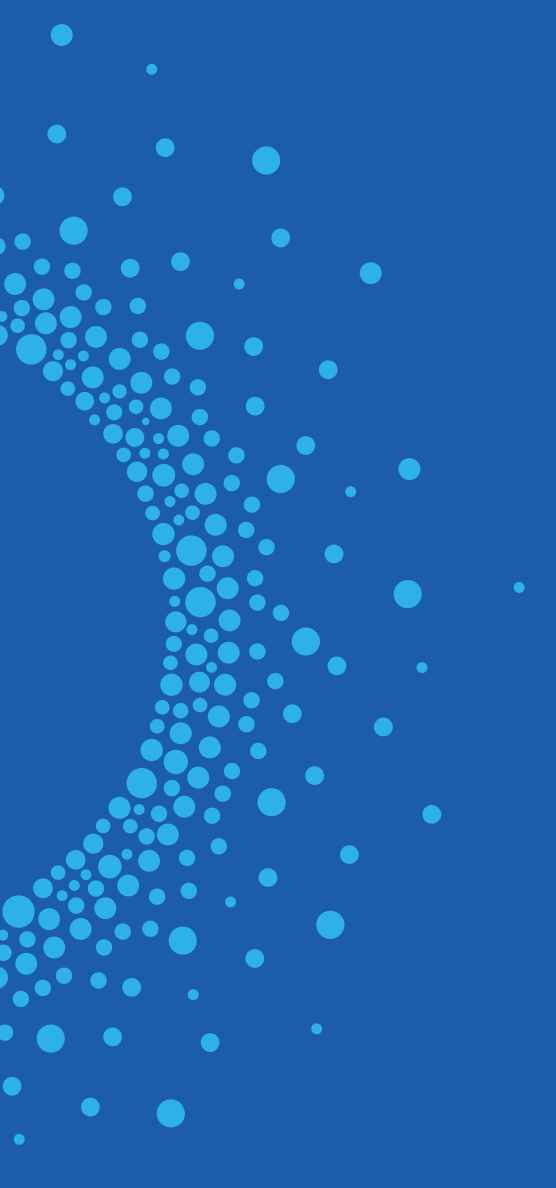
Catalog Number	Description	Size
Z6410004	Absolute Count Microsphere Kit	50T
D60032	Absolute Counter Tube	50T
Z6410004-10	Absolute Counter Tube	10T
Z6410004	Absolute Count Microsphere Kit	50T
Z6910001S	Lysing Solution(10X)	2.5ml
Z6910001M	Lysing Solution(10X)	10ml
Z6910001	Lysing Solution(10X)	100ml
302005	Lysing Solution	100ml
304001	Fixation/Permeabilization Kit	50T
304002	Fixation/Permeabilization Kit	100T
Z6201	Annexin V Binding Buffer (10*)	100T
6910201	Annexin V Binding Buffer (10*)	1000ml
A3314	7AAD	100T
B1721	SA PE	0.1mg
6910076	Human MSC Kit: CD73-FITC/CD105-PE*1 CD45-FITC/HLA-DR-PE*1 IgG1-FITC*1/IgG2-PE*1	50T

## Ordering Information

### VDO QuantoBio Brand CE-IVD products

Catalog Number	Description	Size	Status
E404001	CD3 FITC/CD8 PE/CD45 Percp /CD4 APC Detection Kit for Flow Cytometry	50T	CE-IVD
E404002	CD3 FITC/CD8 PE/CD45 Percp /CD4 APC Detection Kit for Flow Cytometry	100T	CE-IVD
E404003	CD3 FITC/CD16+56 PE/CD45 Percp /CD19 APC Detection Kit for Flow Cytometry	50T	CE-IVD
E404004	CD3 FITC/CD16+56 PE/CD45 Percp /CD19 APC Detection Kit for Flow Cytometry	100T	CE-IVD
E406001	CD3 FITC/CD16+56 PE/CD45 Percp-Cy5.5 /CD4 PE-Cy7/CD19 APC/CD8 APC-Cy7 Detection Kit for Flow Cytometry	50T	CE-IVD
E406002	CD3 FITC/CD16+56 PE/CD45 Percp-Cy5.5 /CD4 PE-Cy7/CD19 APC/CD8 APC-Cy7 Detection Kit for Flow Cytometry	100T	CE-IVD
E302007	Lysing Solution(10X)	2.5ml	CE-IVD
E302008	Lysing Solution(10X)	10ml	CE-IVD
E302009	Lysing Solution(10X)	100ml	CE-IVD
E301001	Absolute Counting Tubes	10T	CE-IVD
E301002	Absolute Counting Tubes	50T	CE-IVD





# BeamCyte™ Flow Cytometer

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# BeamCyte™ Flow Cytometer

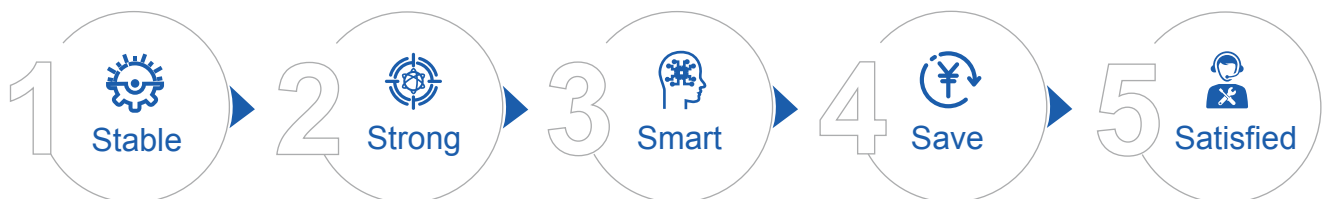
The configuration of BeamCyte™ is Flexible , and can be upgraded from the original machine. Automatic high flux sampling system could be compatible with standard 40 flow tube racks as well as 96-well plates. Sample preprocessor would be cascaded to the machine and to realize analytical automation process.



## BeamCyte™ Configuration List

Configuration			488nm Laser				638nm Laser	
No. of lasers	Fluorescence channels	Total No. of channels	FITC	PE	PerCP	PE-Cy 7	APC	APC-Cy 7
			530/30 BP	585/42 BP	700/54 BP	785/55 BP	660/20 BP	785/55 BP
1	4	6	•	•	•	•		
2	4	6	•	•	•		•	
2	6	8	•	•	•	•	•	•

Stable, efficient , low-consumption and intelligent flow cytometer provides “5S” standard solution for your analysis



## BeamCyte™ 1026/1026M Technical Parameters

Item	Parameters
	Semiconductor laser (488nm、638nm) 6 Fluorescence channels
Laser, Power	488 nm laser, standard configuration 20mW, optional Configuration 40/60mW 638 nm laser, standard configuration 20mW, optional Configuration 40/60mW
Filters configuration	488nm laser: 530/30 nm BP FITC, 585/42 nm BP PE, 700 BP PerCP/ PE-Cy 5, 785/55 nm BP PE-Cy7 638nm laser: 660/20 nm BP APC, 785/55 nm BP APC-Cy7
Optics	The excitation and receiving of solid spatial separation.No fiber conduction Fixed optical path.
Sensitivity of fluorescence	FITC < 75 MESF; PE < 55 MESF; APC < 55 MESF
FSC sensitivity	0.5 μm
SSC sensitivity	0.2 μm
Range of particles	0.2-60 μm
Linear	≥ 0.98
Resolution	CV ≤2%
Carry-over	≤ 0.1%
Detector	Avalanche Photodiode Detector(APD)
Speed	45,000 events/s; 96 - well plates/30min
Minimum sample volume	10μL
Speed of sample	15 ~ 235 μL/Min
Absolute count	Volumetric method; Microspheres method
Preheating time	<4min
Blending mode	Whole plate; single pipe; interval mixing is set freely
Tube numbers of loader	40tubes and 96 holes
Type of tube	Standard flow pipe (12x75mm, 5ml), 96 - well plates(F,U,V type), Centrifugal tube (1.5ml, 2ml)
Capacity of Liquid bottle	Waste liquid barrel 6L,Sheath liquid drum 6L,Cleaning liquid drum 1L
Maintenance system	Liquid path maintenance automation
Software	The software has the edition in English and Chinese. With the function of automatic quality control detection, software can draw Levey-Jennings curve automatically. Support to be connected with clinical LIS software, to facilitate data graphic transmission.
Feature of software	Automatic saving mode against power failure; Detection and analysis can run at the same time.
Compensation	Compensation Matrix List; Quick Compensation ; Auto Compensation Calculation; Auto Compensation
FCS format	FCS 3.0
Volume	The host system: 44 x 43.5 x 52 cm(W x D x H cm) The host system with leader: 57.2 x 53.3 x 52 cm(W x D x H cm) Liquid tray: 44 x 32 x 45 cm(W x D x H cm)
Weight	The host system: 32 Kg; The host system with leader: 38 Kg; Liquid tray: 7 Kg
Operational environment	10 - 35°C, 15-80 % RH
Voltage	220 V~, 50Hz
Computer operating system	Win10 pro



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