

Providing reliable products
and services for life science

PRODUCT BROCHURE

BEIJING T&L BIOTECHNOLOGY CO.,LTD

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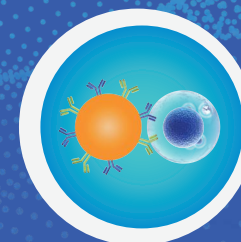


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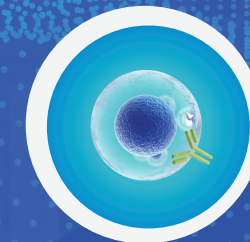
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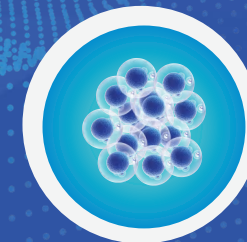
1F/2F/ 3F, BUILDING 13, COURTYARD 50, HUATUO ROAD, DAXING BIOMEDICAL INDUSTRY BASE,
ZHONGGUANCUN SCIENCE PARK, DAXINGDISTRICT, BEIJING



Magnetic Bead
Separation



Activation



Cell Culture



Gene Modification



Brand Honor - Leading Enterprise in Upstream Core Reagents of Cell and Gene Therapy

National high-tech enterprises

ISO9001 Quality System Certification
ISO13485 Medical Device Quality Management System Certification

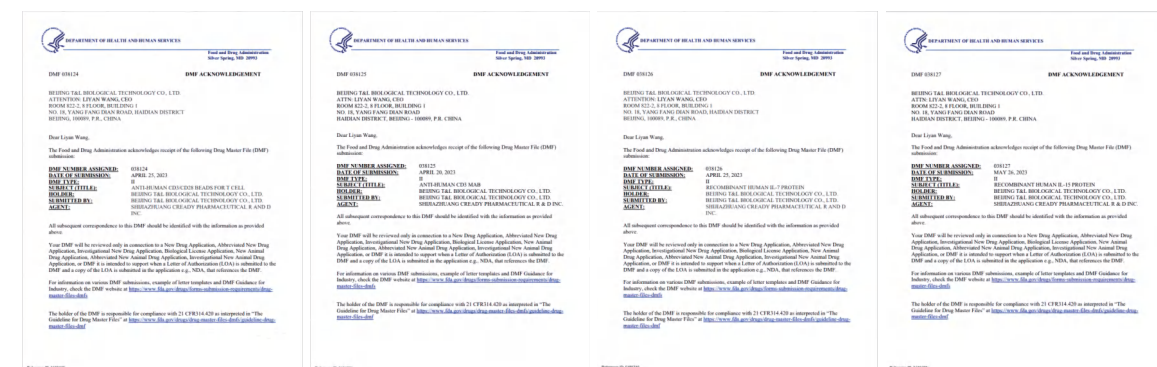


About T&L Biotechnology

T&L Biotechnology Ltd., founded in 2011, focuses on the research and development of upstream GMP grade raw materials and reagents for cell and gene therapy (CGT). We commit to providing reliable products and services for life science. Our products include cell separation & activation magnetic beads, eukaryotic/prokaryotic recombinant protein, serum-free medium, cell culture kits, etc. We provide core raw material reagents and services for biopharmaceutical such as cell and gene therapy drugs and cell storage.

The company has a research and development laboratory and a GMP level clean workshop of 3200m², including cell separation magnetic beads development platform, eukaryotic and prokaryotic protein expression engineering platform, cell culture technology development platform. We have passed both ISO13485 and ISO9001 certifications, and some products have been registered with the FDA DMF in the United States.

FDA DMF filed



DMF 038124

DMF 038125

DMF 038126

DMF 038127



OUR VISION

Let life science benefit everyone in the world.



OUR MISSION

Provide reliable products and services for life science.

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Immunocyte therapy

T cells
NK cells
NKT cells
CIK cells
DC cells
Dendritic cells

Gene therapy

Gene modification



Stem cell therapy

MSC
iPSC
HSC

Technical services

Magnetic bead customization service
Recombinant protein expression
Antibody customization
Cell manufacture
Detection services

Magnetic Bead Separation

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Activation/Differentiation

Anti human monoclonal antibody	04
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Cell Culture

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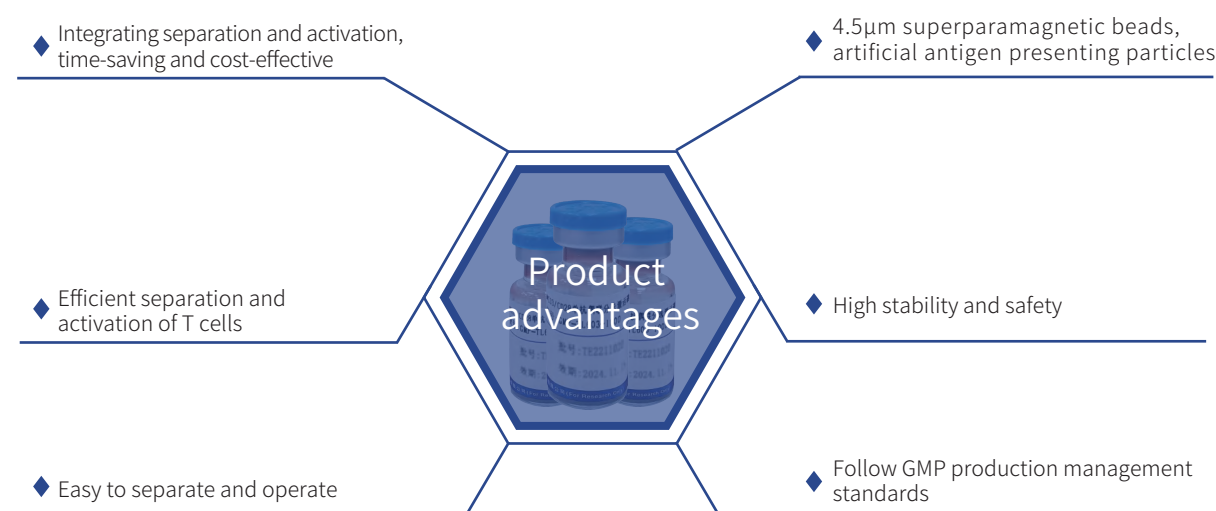
Genome Modification

Tool enzyme	09
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Magnetic Bead Separation

ActSep[®] cell separation magnetic beads

ActSep[®] CD3/CD28 separation & activation magnetic beads integrates cell separation and activation functions with high efficiency, which is suitable for human T cells, CAR-T and other T cells culture applications. It is time-saving, cost-effective.

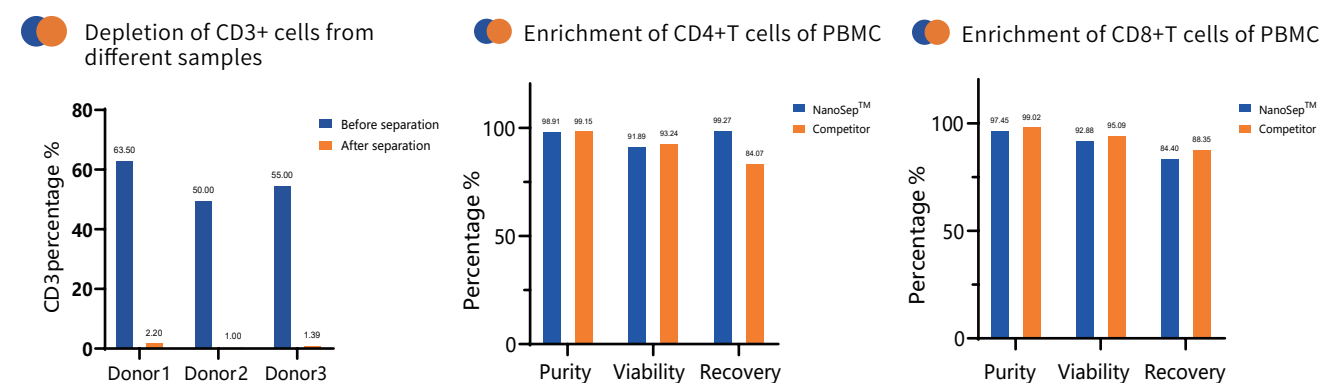


No.	Product name	Art.No	Specifications
1	ActSep [®] CD3/CD28 separation & activation magnetic beads	GMP-TL603	1mL/5mL
2	ActSep [®] CD3/CD28 activation magnetic beads	GMP-TL601	1mL

Magnetic Bead Separation

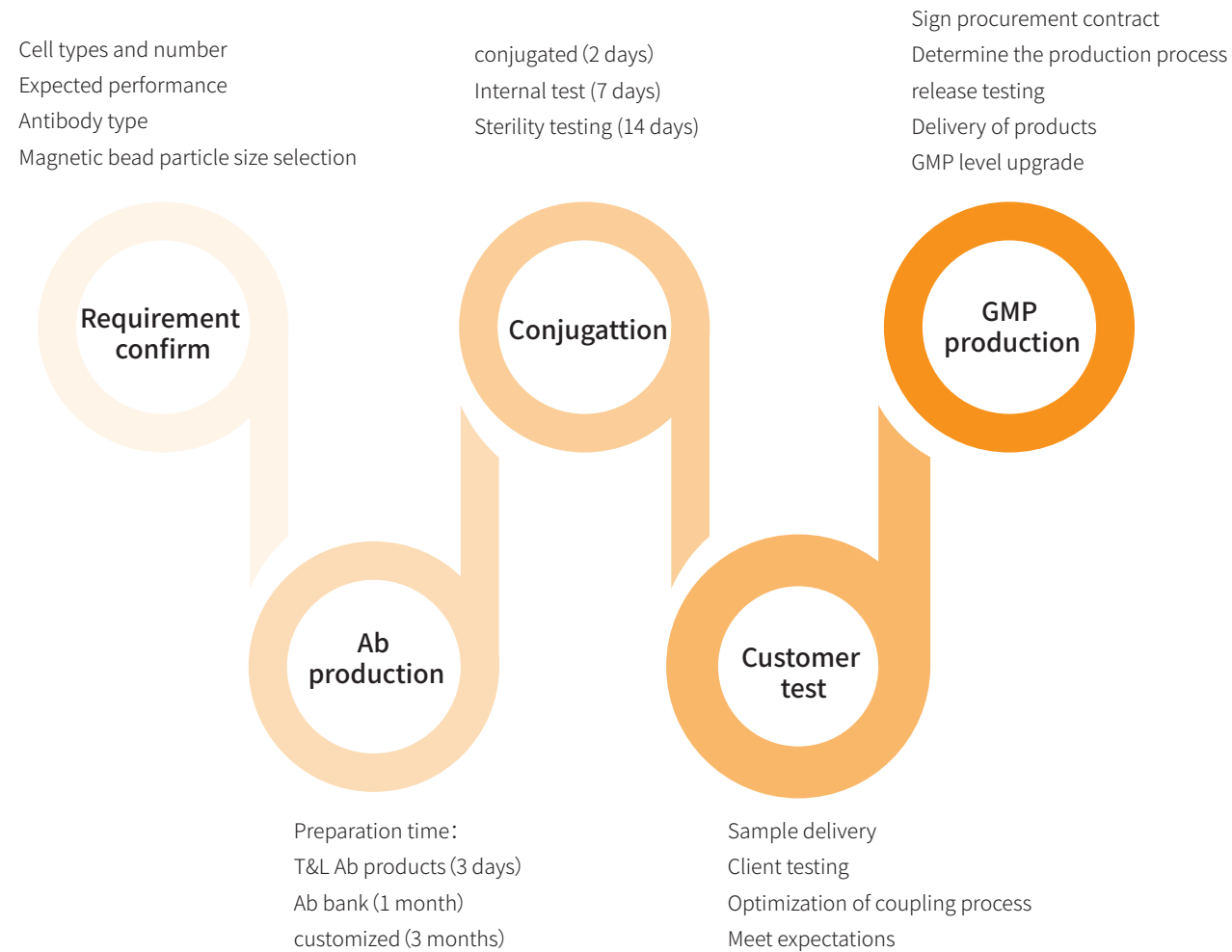
NanoSep[™] cell separation beads

NanoSep[™] cell separation beads was first developed by T&L Biotechnology in China. There are 250nm size beads which can deplete cells without column; 50nm size beads can be used for enrichment or depletion which is quite comparable with market competitors.



Product name	Product No.	Size	Application
NanoSep [™] column-free CD3 beads	TL-621	2 mL	Depletion
NanoSep [™] CD3 beads	TL-622	2 mL	Enrichment/Depletion
NanoSep [™] CD4 beads	TL-623	2 mL	Enrichment/Depletion
NanoSep [™] CD8 beads	TL-624	2 mL	Enrichment/Depletion
NanoSep [™] CD3 beads	GMP-TL622	5 mL	Enrichment/Depletion
NanoSep [™] CD4 beads	GMP-TL623	5 mL	Enrichment/Depletion
NanoSep [™] CD8 beads	GMP-TL624	5 mL	Enrichment/Depletion

Magnetic bead customization service

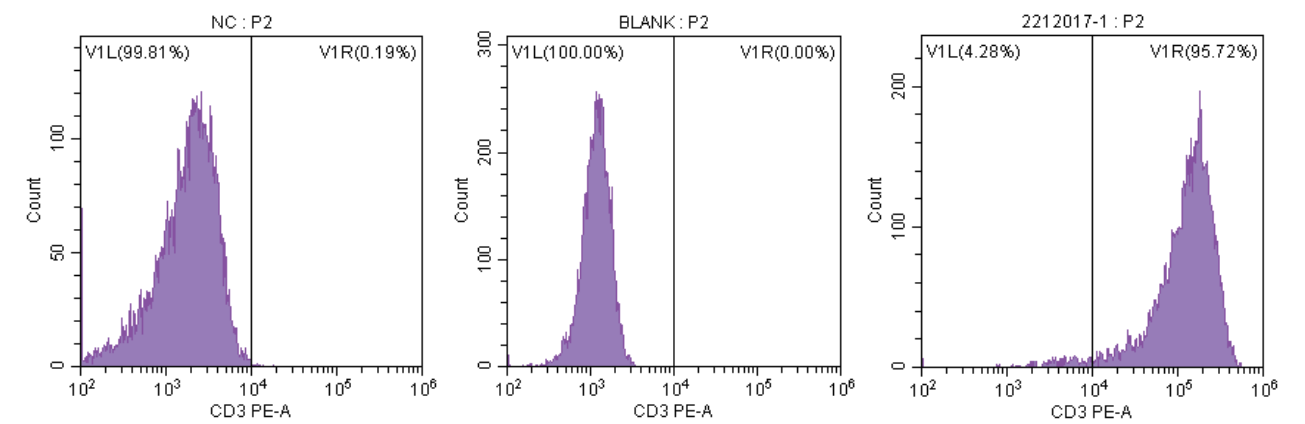


Activation/Differentiation

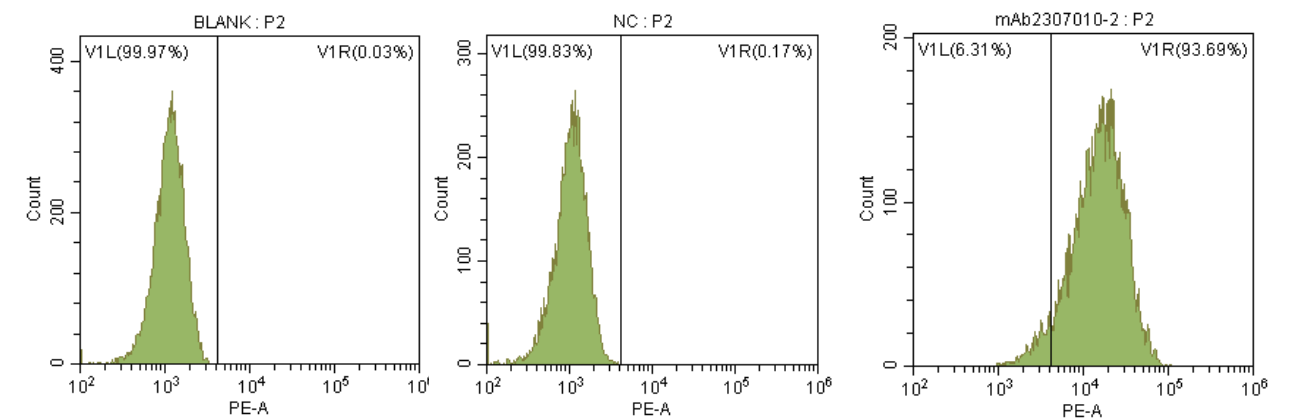
Monoclonal antibody

No.	Product name	Art.No	Specifications
1	Anti human CD3 monoclonal antibody	GMP-TL101	500 µg
2	Anti human CD28 monoclonal antibody	GMP-TL102	500 µg
3	Anti human CD16 monoclonal antibody	GMP-TL201	500 µg
4	Anti human CD20 monoclonal antibody	GMP-TL502	500 µg
5	Anti human CD52 monoclonal antibody	GMP-TL112	100 µg
6	Anti human CD137 monoclonal antibody	GMP-TL778	100 µg
7	Anti human (CD335)NKP46 monoclonal antibody	GMP-TL780	100µg/500µg
8	Anti human HER-2 monoclonal antibody	GMP-TL503	500 µg
9	Anti human PD-1 monoclonal antibody	GMP-TL106	500 µg

CD3 mAb binding activity >90% (Flow)



CD28 mAb binding activity >90% (Flow)

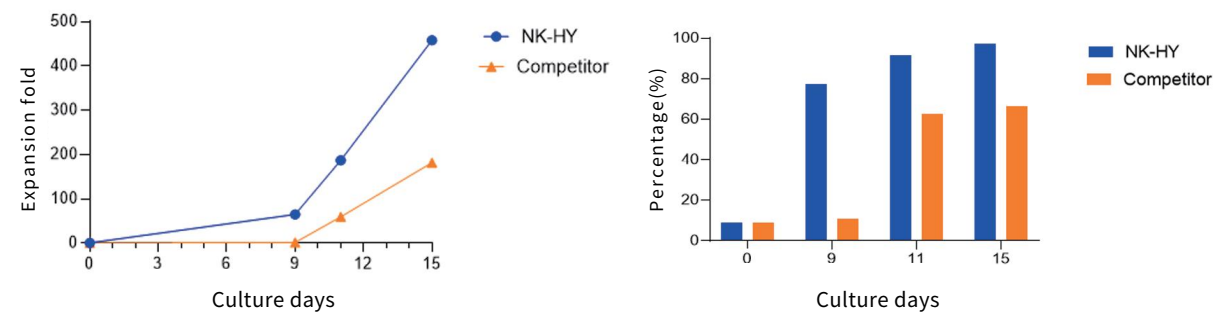


Cell Culture

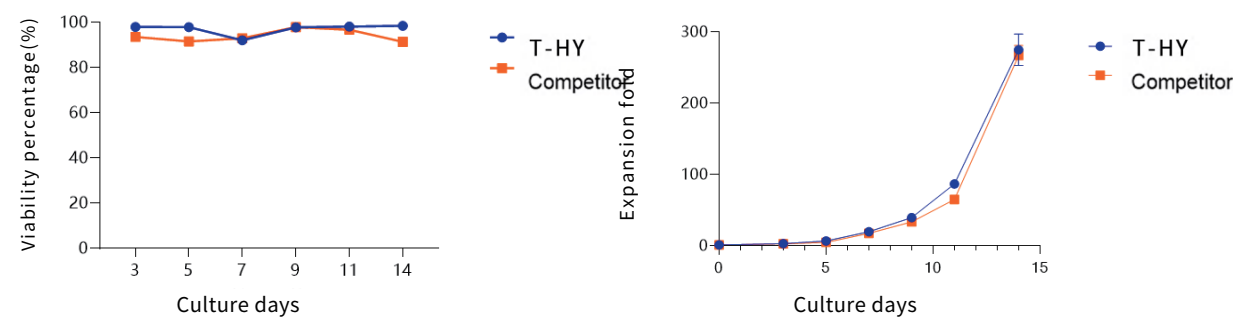
Immune cell culture medium

AMMS® HY07 is the latest developed culture medium for immune cells by T&L Biotechnology. It is serum-free and animal-free, suitable for the expansion of human peripheral blood T cells and NK cells.

High proportion of NK cell expansion



Efficient T cell expansion



No.	Product name	Art.No	Specifications
1	AMMS® serum-free immunocyte medium	AS-HY07	1000mL
2	AMMS® serum-free T-cell medium	GMP-AS-HY10	1000mL
3	AMMS® serum-free NK-cell medium	GMP-AS-HY11	1000mL

Cell Culture

Cell culture kit



Product name	Art.No	Specifications
AMMS® NK cell culture kit 2.0	AS-22	AMMS® NK cell culture kit 2.0 AMMS® NK serum-free medium ×2
AMMS® NKT cell culture kit	AS-07F	AMMS® NKT cell culture kit 2.0 AMMS® NKT serum-free medium ×2
AMMS® MSC cell culture kit 2.0	AS-13	AMMS® MSC additives 2.0 AMMS® MSC basic culture ×1
AMMS® CIK cell expansion reagent & medium kit	AS-15	AMMS® CIK cell expansion kit 2.0 AMMS® CIK serum-free medium ×2
AMMS® DC cell culture supplement	AS-03	500μL

Cell Culture

GMP grade human cytokines & growth factor

Immune cell

Product name	Art.No	Expression system	Specifications
Recombinant human IL-1α protein	GMP-TL109	HEK293	10μg/20μg
Recombinant human IL-1β protein	GMP-TL513	HEK293	10μg/100μg
Recombinant human IL-2 protein(Efficient)	GMP-TL906	E.coli	50μg
Recombinant human IL-4 protein	GMP-TL301	CHO	50μg/100μg
Recombinant human IL-6 protein	GMP-TL512	HEK293	50μg/100μg
Recombinant human IL-7 protein	GMP-TL506	CHO	50μg/100μg
Recombinant human IL-12 protein	GMP-TL508	HEK293	50μg/100μg/200μg
Recombinant human IL-15 protein	GMP-TL202	HEK293	50μg/100μg/500μg
Recombinant human IL-18 protein	GMP-TL902	E.coli	50μg/100μg
Recombinant human IL-21 protein	GMP-TL509	CHO	50μg/100μg
Recombinant human IFN-γ protein	GMP-TL105	HEK293	200μg
Recombinant human GM-CSF protein	GMP-TL302	HEK293	100μg
Recombinant human TNF α protein	GMP-TL303	HEK293	100μg
OK432	GMP-TL107	/	100μg/500μg

Stem cell

Product name	Art.No	Expression system	Specifications
Recombinant human IL-3 protein	GMP-TL501	HEK293	50μg/100μg
Recombinant human bFGF protein (FGF-2)	GMP-TL901	E.coli	50μg
Recombinant human VEGF 165 protein	GMP-TL612	HEK293	50μg/100μg
Recombinant human EGF protein	GMP-TL613	HEK293	50μg/100μg
Recombinant human FLT3 Ligand protein	GMP-TL505	HEK293	50μg
Recombinant human SCF protein	GMP-TL504	HEK293	50μg/100μg
Recombinant human PDGF-BB protein	GMP-TL644	HEK293	50μg/100μg
Recombinant human TGF- β1 protein	GMP-TL643	HEK293	50μg/100μg
Recombinant human TGF- β2 protein	GMP-TL645	HEK293	50μg
Recombinant human TGF- β3 protein	GMP-TL646	HEK293	50μg
Recombinant human BMP-2 protein	GMP-TL634	HEK293	50μg
Recombinant human BMP-4 protein	GMP-TL607	HEK293	50μg
Recombinant human LIF protein	GMP-TL633	HEK293	50μg/100μg
Recombinant human EPO protein	GMP-TL636	HEK293	50μg/100μg
Recombinant human Vitronectin protein	GMP-TL651	HEK293	100μg
Recombinant human TPO protein	GMP-TL650	HEK293	50μg
Recombinant human HGF protein	GMP-TL765	HEK293	50μg/100μg
Recombinant human Laminin511E8 protein	GMP-TL766	HEK293	100 μg/500μg
Recombinant human SHH (C24II) protein	GMP-TL767	E.coli	50μg/100μg
Recombinant Human Activin A Protein	GMP-TL768	E.coli	50μg/100μg
Recombinant human M-CSF protein	GMP-TL535	E.coli	50μg/100μg

Cell Culture

HEK293 cell culture solution

Product name	Art.No	Specifications
AMMS® HEK293 serum-free medium	AS-11	1000 m L
AMMS®HEK293 feed medium	AS-18	100 m L
AMMS® HEK293 transfection reagent	AS-19	1.5 m L



Gene Modification

Tool enzyme

No.	Product name	Art.No	Specifications
1	T7 RNA polymerase	GMP-TLR004	5000U/25000U
2	SP6 RNA polymerase	GMP-TLR001	5000U/25000U
3	CAS 9 nuclease	GMP-TLR005	90pmol



- ISO9001 quality system certification, ISO13485 medical device quality management system certification
- Animal-free, pharmaceutical grade raw and auxiliary materials
- Complete equipment certification and personnel training



Filling

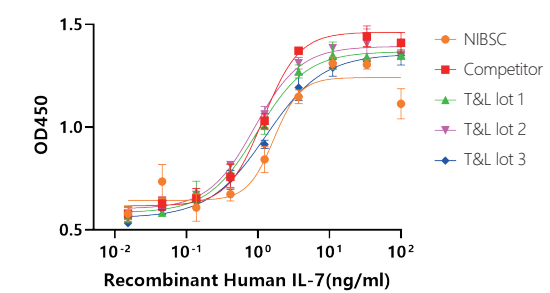
- Automated aseptic filling
- A-level filling environment



Quality control

- high batch stability
- Provide COA files for each batch
- Functional testing
- Declaration support

Recombinant Human IL-7 stimulates proliferation of PBMC



Product QC report Report No. 20230072

Basic Information			
Name	Recombinant Human Virotoxin Protein		
Batch number	230308	Specification	100µg/plate
Catalog number	GMP-TL01-0100	Storage condition	2-8°C
Production Date	March 15, 2023	Valid until	March 30, 2023

Test Items		
Project	Reference range	Result
Differentiation	SDS-PAGE(Reduced/non-reduced)	Compliance
Physical properties	Protein-liquid preparation, white loose body in form, and clear liquid after resolution	Compliance
Visible foreign matter	No foreign bodies were seen	Compliance
Capacity of loading	Not lower than the identification volume	Compliance
Mycoplasma	PCR method	Compliance
Sterility test	Direct method	Compliance
Moisture	≤0.0%	Compliance
pH value	6.5-7.5	7.20
Endotoxin	<0.1EU/µg	<0.1EU/µg
Purity	SDS-PAGE	Compliance
Detection of host cell protein residue	ELISA method host protein residues in assay samples ≤ 100 ppm	Compliance
Adsorbability	HEP-2 cells adhere well to the wall	Compliance

Test basis: Chinese Pharmacopoeia & T&L Biotechnology Internal standards

Conclusion: Samples meet the requirements. Product requirements.

Reported by: Zeng Yuxin Date of report: March 22, 2023
 Approved by: Xu Zhenqiang Approval date: March 22, 2023