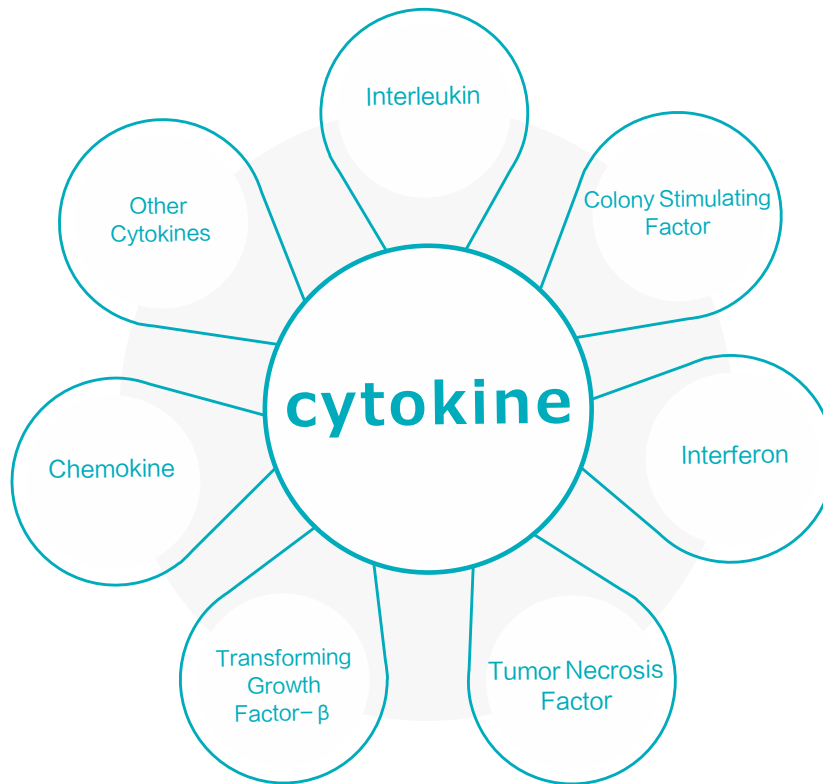


CHASELECTION CYTOKINE SERIES

Provide comprehensive and professional cytokine products for the cell therapy industry

PRODUCT DESCRIPTION

Based on the GMP-level quality management system platform, we combine the production specifications of cell therapy drugs to provide a variety of products such as interleukins, TGF-β family, tumor necrosis factor TNF, and colony-stimulating factor CSF. With stricter quality management and release testing standards, it supports the clinical research of immune cell therapy drugs and accelerates the clinical and marketing application processes.



Cat.No.	Cytokines
CAR-T	IL-2/IL-7/IL-12/IL-15/IL-18/IL-21
TCR-T	IL-2/IL-4/IL-7/IL-12/IL-15/IL-21/TGF-beta
CAR-NK	IL-2/IL-12/IL-15/IL-18/IL-21/IL-27/SCF/Fit-3L
NK Cells	IL-2/IL-3/IL-7/IL-12/IL-15/IL-18/IL-21/SCF/Fit-3L
T Cells	IL-2/IL-4/IL-6/IL-7/IL-12/IL-15/IL-18/IL-21/TGF-beta
TIL (Tumor-Infiltrating Lymphocytes)	IL-2/IL-4/IL-6/IL-7/IL-12/IL-15/IL-21/GM-CSF
DC Cells (Dendritic Cells)	IL-1β/IL-4/IL-7/IL-15/GM-CSF/TGF-beta/IFN-γ/Fit-3L
Mesenchymal Stem Cells	IL-2/IL-3/IL-6/VEGF/SCF/TGF-beta/GM-CSF/BMP-4/LIF/BMP-2/EPO/FLT3L/PDGF-BB/EGF/FGF-2
Hematopoietic Stem Cells	SCF/GM-CSF/IL-3/IL-6/LIF/TPO/VEGF/BMP-4/BMP-2/EPO/FLT3L/TGF-beta
Embryonic Stem Cells	IL-2/IL-3/IL-6/IL-7/IL-15/SCF/BMP-4/LIF/BMP-2/EPO/FLT3L/PDGF-BB/EGF/FGF-2/BAFF/TGF-beta/ActivinA
Organoids	Wnt-3a,R-spondin 1/Noggin/FGF2/bFGF,FGF10/EGF/SHH/HGF/BDNF/GDNF/Activin A

PRODUCT FEATURES

- Tag-free purification
- Strong specificity and high purity
- Both GMP and research levels can be provided
- Fully meet the needs of various cell cultures
- Specifications can be customized according to requirements

IMPROVED CYTOKINES

IL-2 Pro

IL-2 with high solubility

PRODUCT DESCRIPTION

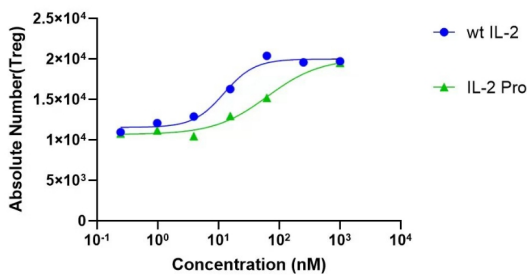
Compared with wild-type IL-2, IL-2 Pro can slowly activate regulatory T cells (Treg), reduce the negative regulation of the immune system, and give full play to the immunomodulatory function of T cells to a greater extent. This product has high solubility, strong purity and specificity, and is more convenient to use in relevant drug processes and R & D.

PRODUCT FEATURES

- High activity and bias
- High purity and high solubility
- Strong batch-to-batch stability

EXPERIMENTAL DATA

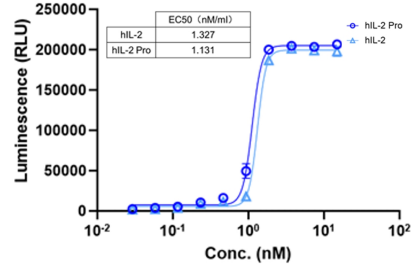
Comparison of activity with wild-type IL-2



Activity comparison between IL-2 Pro and wild-type IL-2

The results show that compared with wild-type IL-2, IL-2 Pro can slowly activate regulatory T cells (Treg).

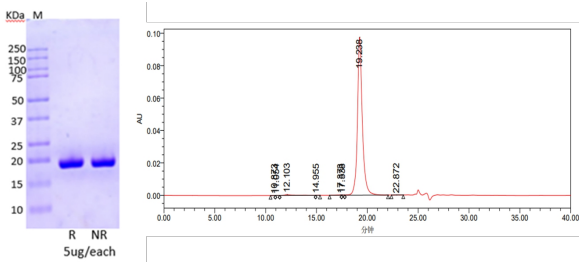
Comparison of activity



Activity comparison between IL-2 Pro and IL-2 (CTLL-2 cells).

The experiment on the activity of mouse T lymphocytes (CTLL-2) cells shows that the activity of IL-2 Pro is similar to that of IL-2.

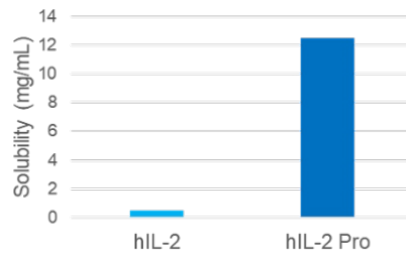
Purity determination by SDS-PAGE and SEC-HPLC



Purity analysis of IL-2 Pro by SDS-PAGE and SEC-HPLC

SDS-PAGE showed that the molecular weight of the protein was approximately 17 kDa, and no impurity proteins were observed. SEC-HPLC showed high purity, and no aggregates were produced.

Solubility determination



Comparison of solubility between IL-2 Pro and IL-2

Under the condition of pH 7.4, the concentration of IL-2 Pro can reach 12.5 mg/ml, which is 25 times that of the wild type.

Cytokine products

IMPROVED CYTOKINES

IL-15 PRO

IL-15 with ultra-high activity

PRODUCT DESCRIPTION

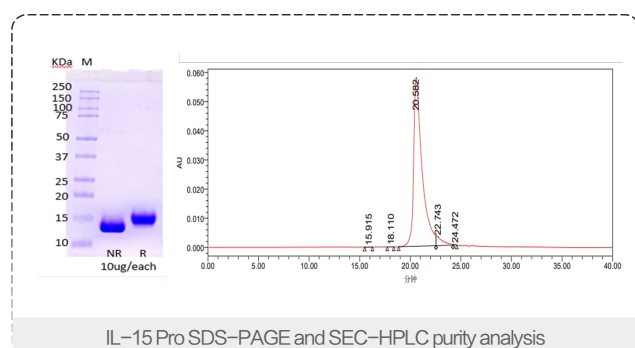
IL-15 Pro is an IL-15 with ultra-high activity obtained through precise molecular design. In the production process, the problems of poor stability and easy formation of isomers of IL-15 have been solved. The purification process does not rely on reverse-phase chromatography, and it is more stable in solution. The affinity of IL-15 Pro for the IL-15 receptor is more than 100 times higher than that of the wild-type, and its ability to promote the proliferation of NK cells is 20 times higher.

PRODUCT FEATURES

- High activity, better cell stimulation effect
- Animal-free, reducing the risk of introducing exogenous viruses
- Less likely to form isomers, more stable for batch-to-batch use
- Both GMP grade and research grade are available
- High purity, stronger specificity

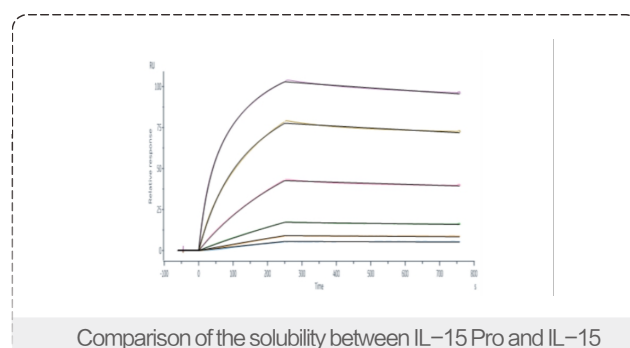
EXPERIMENTAL DATA

Purity determination by SDS-PAGE and SEC-HPLC



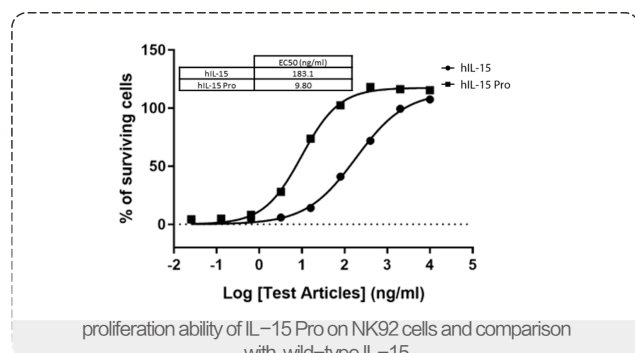
NR & R SDS-PAGE showed that the molecular weight of the protein was approximately 15 kDa (left), and no impurity protein was observed; SEC result showed high purity with no aggregates produced (right)

Determination of IL-15 Pro binding activity



SPR results showed that the Kd between human CD122 (IL-15R-beta) and IL-15 Pro is 0.51 nM

Cellular activity assay of IL-15 Pro



The proliferation ability of IL-15 Pro on NK cells (NK92) can be increased by 20 times

ORDERING INFORMATION

Cat.No.	Level	Cat.No.	Specification
IL-2Pro	RUO grade	CS-IL2-10-2	10 μg
		CS-IL2-20-2	20 μg
		CS-IL2-50-2	50 μg
IL-15 Pro	GMP grade	CS-GIL2-50-2	50 μg
		CS-GIL2-500-2	500 μg
	RUO grade	CS-IL15-10L-2	10 μg
		CS-IL15-20-2	20 μg
		CS-IL15-50-2	50 μg
GMP grade	CS-GIL15-50-2	50 μg	
	CS-GIL15-500-2	500 μg	

Cytokine products

TPO CYTOKINE

PRODUCT DESCRIPTION

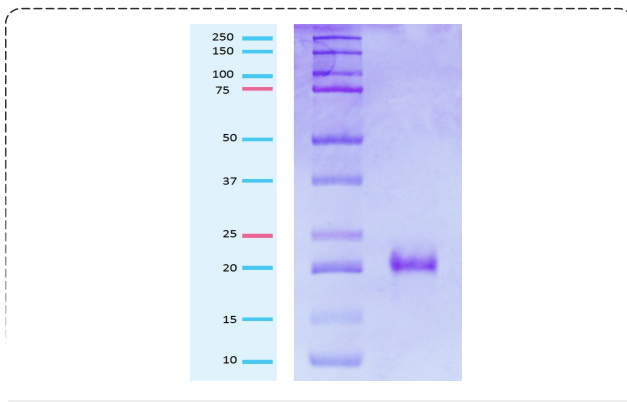
Our Thrombopoietin (TPO) has a molecular weight of approximately 19 kDa, and its molecular sequence has a homology of over 98% with the wild – type. It uses the prokaryotic expression system, contains no animal – derived components, and adopts a non – tagged purification method, which significantly reduces the risk of introducing exogenous metal ions. Its purity is > 95%, and the endotoxin level is < 0.1 EU/μg. While ensuring safety, it greatly improves the specificity of the product and fully meets the needs of customers

PRODUCT FEATURES

- ▶ Prokaryotic expression system, no animal – derived components
- ▶ High activity, specific activity $\geq 1 \times 10^6$ units/mg
- ▶ Non-tag purification, low risk of introducing exogenous metal ions

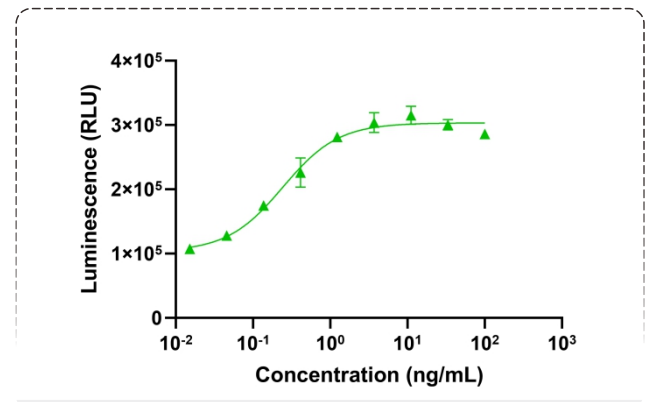
EXPERIMENTAL DATA

Electrophoresis (SDS-PAGE)



Detected by SDS-PAGE, the results showed that the molecular weight of the protein was approximately 19 kDa and no impurity proteins were observed, which was similar to the natural protein.

Bioactivity – Bioactivity CELL



Through the proliferation dose-dependent stimulation experiment on human MO7e cells, the results showed that the corresponding specific activity is $\geq 1 \times 10^6$ units/mg

PRODUCT APPLICATIONS

- (1) Research related to hematopoietic stem cell culture: Engaged in research on diseases related to hematopoietic stem cells, such as thalassemia, acute myeloid leukemia, aplastic anemia, etc.
- (2) Research on the induced directed differentiation of iPSCs: Engage in research related to the directed differentiation of induced pluripotent stem cells (iPSCs) into platelets, T cells, and NK cells.

ORDERING INFORMATION

Cat.No.	Level	Cat.No.	Specification
TPO	RUO grade	CS-TPO-10L-2	10 μg
		CS-TPO-50L-2	50 μg
Flt3L	RUO grade	CS-FLT3L-10-2	10 μg
		CS-FLT3L-20L	20 μg
		CS-FLT3L-50L	50 μg
GM-CSF	RUO grade	CS-CSF2-10L	10 μg
		CS-CSF2-20L	20 μg
		CS-CSF2-50-2	50 μg
SCF	RUO grade	CS-SCF-10-2	10 μg
		CS-SCF-20L	20 μg
		CS-SCF-50L	50 μg