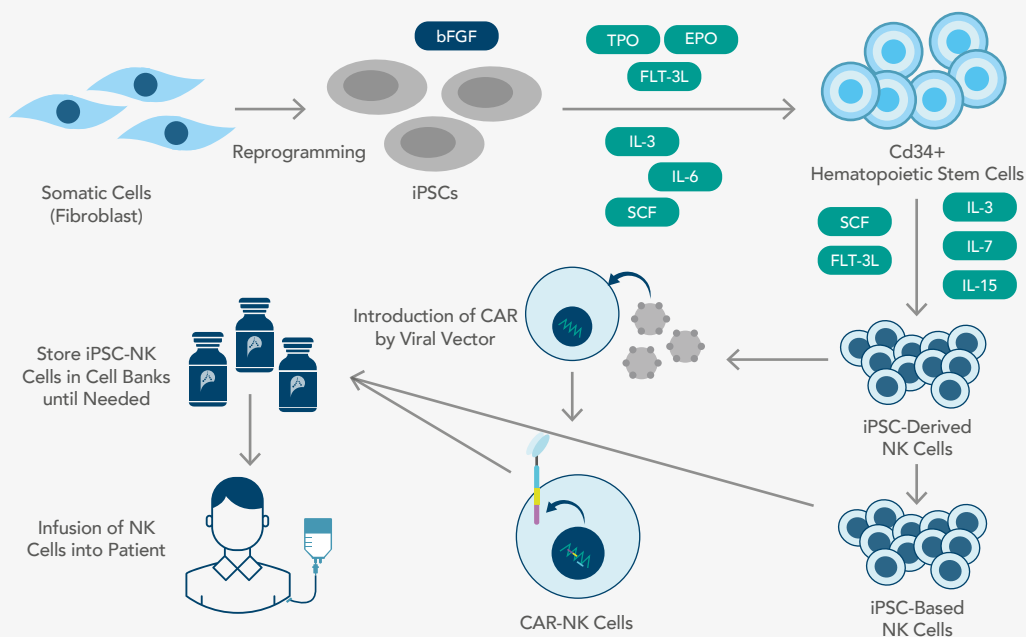


iPSCs to NK cells

A cell therapy perspective

- Natural killer (NK) cells are key effectors of the innate immune system.
- NK cells have features that can overcome current challenges associated with CAR-T cells.
- Several clinical trials demonstrate the efficacy of allogeneic NK cell adoptive transfer therapy.
- Unlike allogeneic CAR-T cell therapy, allogeneic NK cells do not show Graft vs host disease (GvHD).
- iPSCs-derived NK cells provide added benefits in terms of ease of genetic modification, clonal selection, and no need of a donor for cell collection.
- iPSCs-derived NK cells are an excellent choice for off-the-shelf cell therapy.

Overview of iPSC-derived NK cell therapy



Humankine® is

- ✓ Animal component free
- ✓ Endotoxin free
- ✓ Xeno free
- ✓ Tag free
- ✓ Carrier free

Proteintech offers a portfolio of bioactive cytokines for iPSC maintenance and differentiation to NK cells. Proteintech's HumanKine® recombinant proteins are Human cells (HEK293) expressed with high bioactivity, stability, lot-to-lot consistency, and native human conformation & post-translational modifications, which ensures better proliferation and differentiation of cell cultures.

Cytokines and Antibodies for iPSCs to NK cell workflows



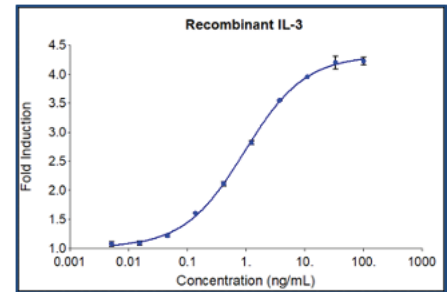
HumanKine Cytokines and Growth Factors

Protein	Cat No.	Activity	Purity	GMP-Grade
IL-2	HZ-1015	0.05-0.35 ng/mL	>95%	Yes
IL-3	HZ-1074	0.4-2.0 ng/mL	>95%	Yes
IL-7	HZ-1281	0.2-1.4 ng/mL	>95%	Yes
IL-15	HZ-1323	0.07-0.37 ng/mL	>95%	Yes
SCF	HZ-1024	15-85 ng/mL	>95%	Yes
Flt3-Ligand	HZ-1151	0.4-3.0 ng/mL	>95%	Yes
BMP4	HZ-1045	1.5-9 ng/mL	>95%	Yes
FGFbasic-TS protein	HZ-1285	0.05-0.4 ng/mL	>95%	Yes
EPO	HZ-1168	0.28-1.4 ng/mL	>95%	
TPO	HZ-1248	Typically ≤ 5 ng/mL	>95%	

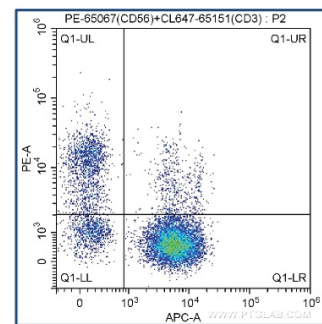
Read more about Humankine here

Primary Antibodies

Target	Cat No.	Type	Applications
CD34	14486-1-AP	Rabbit Poly	WB, IHC, IF, FC, ELISA
	60180-1-Ig	Mouse Mono	WB, IHC, IF, FC, ELISA
CD45	20103-1-AP	Rabbit Poly	WB, IHC, IF, FC, ELISA
	60287-1-Ig	Mouse Mono	WB, IP, IHC, IF, FC, ELISA
	65109-1-Ig	Mouse Mono	FC
CD117	18696-1-AP	Rabbit Poly	WB, IHC, IF, FC, ELISA
	65154-1-Ig	Mouse Mono	FC
CD161	65115-1-Ig	Mouse Mono	FC
	67537-1-Ig	Mouse Mono	WB, IHC, ELISA
CD94	13332-1-AP	Rabbit Poly	WB
CD56	14244-1-AP	Rabbit Poly	WB, IHC, IF, FC, ELISA
	60238-1-Ig	Mouse Mono	WB, IHC, IF, ELISA
	65067-1-Ig	Mouse Mono	FC
CD16	16559-1-AP	Rabbit Poly	WB, IHC, IF, FC
	65090-1-Ig	Mouse Mono	FC
	66779-1-Ig	Mouse Mono	IHC, ELISA
CD3	17617-1-AP	Rabbit Poly	WB, IP, IHC, IF, FC, ELISA
	60181-1-Ig	Mouse Mono	WB, IHC, IF, FC, ELISA



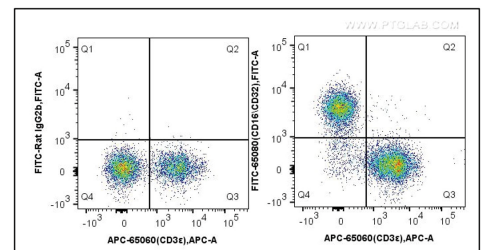
Humankine® Recombinant IL-3 (Cat no: HZ-1074): The activity was determined by the dose-dependent stimulation of the TF-1 (human erythroleukemic) cell line. Cell number was quantitatively assessed by PrestoBlue® Cell Viability Reagent.



Coralite® 647 Anti-Human CD3 (Cat no: CL647-65151)/PE Anti-Human CD56 (Cat no: PE-65067): Human peripheral blood lymphocytes were surface stained with both antibodies. Cells were not fixed.

Conjugated Antibodies for Flow Cytometry

Target	Clone	FITC	PE	PE	CL 488	CL 594	CL 647
CD34	QBEnd-10	FITC-65183	PE-65183				
CD45	HI30	FITC-65109	PE-65109	APC-65109	CL488-65109	CL594-65109	CL647-65109
	2D1	FITC-65082	PE-65082		CL488-65082		CL647-65082
	F10-89-4	FITC-65064	PE-65064	APC-65064			
CD117	104D2		PE-65154	APC-65154			
CD161	HP-3G10	FITC-65115	PE-65115	APC-65115	CL488-65115		CL647-65115
CD56	MEM 188		PE-65067				
CD16	3G8		PE-65090		CL488-65090		CL647-65090
CD3	OKT3	FITC-65133	PE-65133	APC-65133	CL488-65133		CL647-65133
	UCHT1	FITC-65151	PE-65151	APC-65151	CL488-65151		CL647-65151
	Hit3a	FITC-65112	PE-65112	APC-65112	CL488-65112		CL647-65112
	SK7	FITC-65148	PE-65148	APC-65148	CL488-65148		CL647-65148



Mouse splenocytes were surface stained with APC-Anti-Mouse CD3e (APC-65060, Clone: 145-2C11) and 0.25 ug FITC-Rat IgG2b isotype control (left) or 0.25 ug FITC Anti-Mouse CD16 / CD32 (FITC-65080, Clone: 2.4G2) (right). Cells were not fixed.