

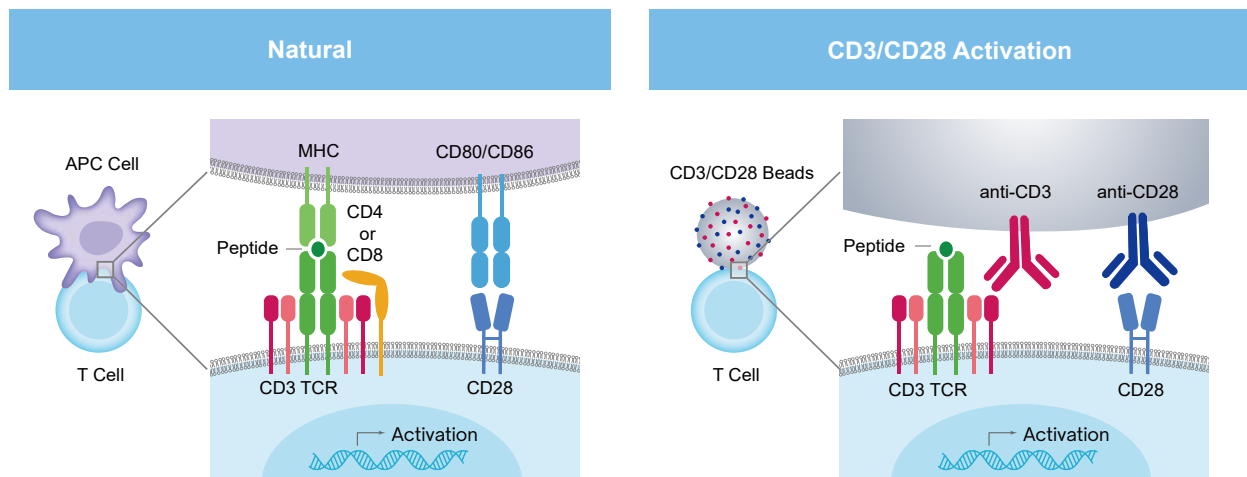
CD3/CD28 Activation

T cell activation is essential for immune response, involving antigen recognition and subsequent activation. This process requires three signals: Signal 1 from the T cell receptor (TCR) binding to antigens presented by the major histocompatibility complex (MHC) on antigen-presenting cells (APCs), Signal 2 from co-stimulatory molecules like CD28 on T cells binding to CD80 or CD86 on APCs, and Signal 3 from cytokines that guide T cell differentiation and proliferation. Abnova's CD3/CD28 IsoActiveBeads™ and CD3/CD28 ActiveBeads™ mimic these signals to activate T cells *in vitro*. These beads are coated with antibodies targeting CD3 and CD28 on T cells, providing Signals 1 and 2 to prompt activation, proliferation, and differentiation. They continuously supply activation signals, enabling the production of large numbers of activated T cells over several days to weeks. The beads can be removed using a magnetic separator and are valuable in T cell research, particularly for studying tumors, autoimmune diseases, and regulatory dysfunctions.

Advantages

- High Efficiency: Consistently achieving high rates of T-cell expansion.
- Contamination-Free: Using magnetic beads to support a clean process.
- Preserved Functionality: Maintaining activated T cells *in vivo*-like function.
- Long-term Utility: Activating and expanding T cells with Human or Mouse CD3/CD28 ActiveBeads™ for three days to several weeks.
- No Feeder Cell: Easily expanding T cells without feeder cells.

Natural T Cell Activation vs. CD3/CD28 T Cell Activation

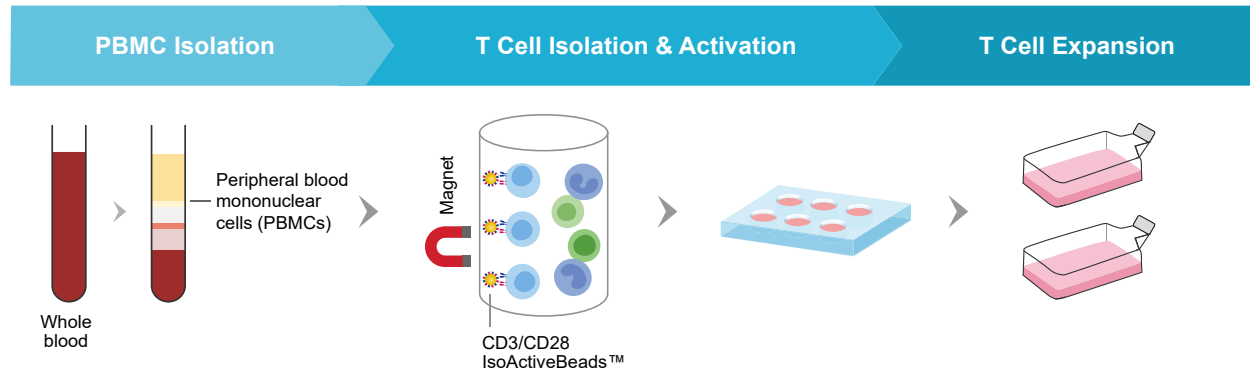


Human CD3/CD28 IsoActiveBeads™

T Cell Isolation, Activation & Expansion

CD3/CD28 IsoActiveBeads™ allowing for T cell isolation, *in vitro* activation, and expansion without the need for antigen-presenting cells are available in Human CD3/CD28 IsoActiveBeads™ with humanized antibodies suitable for immunodeficient xenograft tumor models.

Workflow



Human CD3/CD28 IsoActiveBeads™

Catalog # U0603

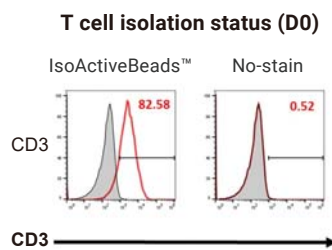
Cell Type: T Cells

Capacity: Up to 1×10^7 CD3 T cells

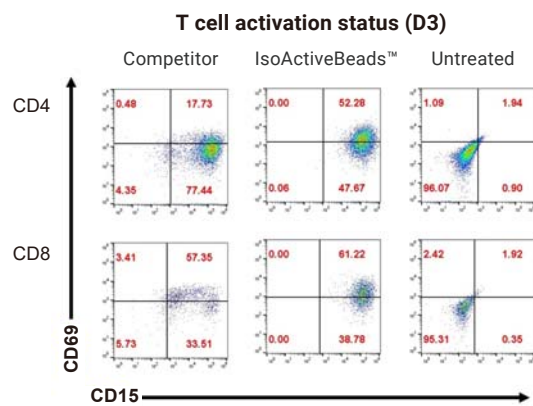
Reactivity: Human

Regulatory Status: For research use only (RUO)

Isolation



Stimulation



RUO Grade Recombinant Proteins

Abnova, with many years of experience in recombinant protein research and development, offers RUO-grade recombinant proteins that cover key areas in cell therapy research, such as CD proteins, MHC Proteins, immune checkpoints, and other cell therapy targets. Abnova's recombinant proteins exhibit high purity and validated bioactivity, making them ideal for supporting scientific research in cell therapy.

CD Proteins

Catalog No.	CD Marker	Product Name	Reactivity	Expression System	Application
P10276	CD2	CD2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10055	CD3E	CD3E (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10085	CD3E&CD3D	CD3E/CD3D (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10258	CD3E&CD3D	CD3E/CD3D (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10086	CD3E&CD3G	CD3E/CD3G (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10234	CD3E&CD3G	CD3E/CD3G (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10192	CD4	CD4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10214	CD4	CD4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9745	CD5	CD5 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10004	CD5	CD5 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9747	CD6	CD6 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P9719	CD7	CD7 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10282	CD7	CD7 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10143	CD16a	FCGR3A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10168	CD16a	FCGR3A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9763	CD16b	FCGR3B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P10142	CD16b	FCGR3B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9859	CD20	MS4A1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9908	CD21	CR2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10095	CD22	CD22 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10096	CD22	CD22 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9702	CD24	CD24 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10053	CD24	CD24 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10151	CD24	CD24 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10152	CD24	CD24 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10180	CD24	CD24 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10132	CD25	IL2RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10299	CD26	DPP4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10300	CD26	DPP4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10097	CD27	CD27 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10298	CD27	CD27 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9866	CD30	TNFRSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10083	CD30	TNFRSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10141	CD32a	FCGR2A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10167	CD32a	FCGR2A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10130	CD32b	FCGR2B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10139	CD33	CD33 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10175	CD33	CD33 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10113	CD33L3	SIGLEC15 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9928	CD34	CD34 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10005	CD38	CD38 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10098	CD38	CD38 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10068	CD40	CD40 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10120	CD40	CD40 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9769	CD42b	GP1BA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9695	CD44	CD44 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9696	CD44	CD44 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9751	CD45	PTPRC (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9940	CD45	PTPRC (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9870	CD46	CD46 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10118	CD47	CD47 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9991	CD48	CD48 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10099	CD48	CD48 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9979	CD54	ICAM1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9800	CD55	CD55 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE

RUO Grade Recombinant Proteins

CD Proteins

Catalog No.	CD Marker	Product Name	Reactivity	Expression System	Application
P9835	CD58	CD58 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P9902	CD62E	SELE (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10196	CD62E	SELE (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10136	CD62P	SELP (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10169	CD64	FCGR1A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10290	CD66a	CEACAM1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9997	CD66b	CEACAM8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SPR
P10247	CD66c	CEACAM6 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10123	CD70	CD70 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10266	CD70	CD70 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9892	CD71	TFRC (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10252	CD71	TFRC (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10002	CD73	NT5E (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10100	CD73	NT5E (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9989	CD79B	CD79B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10153	CD79B	CD79B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10076	CD80	CD80 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10163	CD80	CD80 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9872	CD83	CD83 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10001	CD83	CD83 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10188	CD85a	LILRB3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9905	CD85d	LILRB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9938	CD85d	LILRB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10042	CD85d	LILRB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA, SPR
P10185	CD85d	LILRB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA
P9904	CD85j	LILRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10058	CD85j	LILRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA, SPR
P10187	CD85j	LILRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA
P10221	CD85j	LILRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10041	CD85k	LILRB4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10200	CD85k	LILRB4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10213	CD85k	LILRB4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10075	CD86	CD86 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10250	CD86	CD86 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9806	CD93	CD93 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10027	CD95	FAS (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9731	CD96	CD96 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9778	CD96	CD96 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P9849	CD96	CD96 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10000	CD98	SLC3A2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10277	CD100	SEMA4D (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10219	CD105	ENG (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10183	CD111	PVRL1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9970	CD112	PVRL2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10182	CD112	PVRL2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10198	CD113	PVRL3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9995	CD115	CSF1R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SPR
P10197	CD115	CSF1R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9833	CD118	LIFR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10025	CD120a	TNFRSF1A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10026	CD120a	TNFRSF1A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10144	CD120b	TNFRSF1B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10224	CD120b	TNFRSF1B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10232	CD121b	IL1R2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9742	CD122	IL2RB (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P10212	CD122	IL2RB (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10063	CD123	IL3RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9974	CD124	IL4R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10112	CD124	IL4R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9898	CD125	IL5RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10157	CD125	IL5RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9973	CD126	IL6R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10158	CD126	IL6R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10296	CD127	IL7R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA

RUO Grade Recombinant Proteins

CD Proteins

Catalog No.	CD Marker	Product Name	Reactivity	Expression System	Application
P10297	CD127	IL7R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9743	CD132	IL2RG (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P10215	CD140b	PDGFRB (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9824	CD146	MCAM (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9819	CD147	BSG (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9994	CD152	CTLA4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SPR
P10103	CD152	CTLA4 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9804	CD153	TNFSF8 Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10131	CD153	TNFSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10106	CD154	CD40LG (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10107	CD154	CD40LG (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA
P10007	CD155	PVR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10101	CD155	PVR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10165	CD155	PVR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10037	CD159a	KLRC1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10272	CD159a	KLRC1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9855	CD159a&CD94	KLRC1/KLRD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10036	CD159a&CD94	KLRC1/KLRD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10243	CD159a&CD94	KLRC1/KLRD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA
P10265	CD159a&CD94	KLRC1/KLRD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10229	CD159c&CD94	KLRC2/KLRD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9865	CD160	CD160 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10184	CD160	CD160 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9831	CD161	KLRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9884	CD161	KLRB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P9772	CD166	EGFR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10015	CD166	ALCAM (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10092	CD172a	SIRPA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10093	CD172a	SIRPA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA, SPR
P10278	CD172a	SIRPA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10284	CD172a	SIRPA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10008	CD177	KIT (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10019	CD200	CD200 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10275	CD200	CD200 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9856	CD200 R1	CD200R1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10245	CD200 R1	CD200R1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9782	CD205	LY75 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9944	CD209	CD209 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P9926	CD212	IL12RB1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P10260	CD215	IL15RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10267	CD215	IL15RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9770	CD217	IL17RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P9776	CD217	IL17RA (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10064	CD218a	IL18R1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10137	CD221	IGF1R (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10110	CD223	LAG3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9992	CD226	CD226 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SPR
P10104	CD226	CD226 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9793	CD244	CD244 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10115	CD244	CD244 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9917	CD248	CD248 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9871	CD254	TNFSF11 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P9887	CD254	TNFSF11 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10073	CD257	TNFSF13B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10081	CD257	TNFSF13B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10124	CD257	TNFSF13B (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10046	CD276	CD276 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10077	CD276	CD276 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9779	CD277	BTN3A1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10010	CD277	BTN3A1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9756	CD278	ICOS (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P9978	CD278	ICOS (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10206	CD278	ICOS (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10261	CD278	ICOS (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR

RUO Grade Recombinant Proteins

CD Proteins

Catalog No.	CD Marker	Product Name	Reactivity	Expression System	Application
P9708	CD279	PDCD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10114	CD279	PDCD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10125	CD279	PDCD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10171	CD279	PDCD1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9845	CD300A	CD300A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9932	CD300A	CD300A (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9972	CD305	LAIR1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10218	CD305	LAIR1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P9971	CD306	LAIR2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SPR
P10035	CD314	KLRK1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, IA
P9706	CD318	CDCP1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10286	CD318	CDCP1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR
P10287	CD318	CDCP1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10024	CD319	SLAMF7 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10140	CD319	SLAMF7 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10199	CD319	SLAMF7 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9834	CD335	NCR1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10138	CD335	NCR1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10283	CD335	NCR1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9780	CD337	NCR3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10220	CD337	NCR3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	ELISA, SPR

MHC Proteins

Catalog No.	Product Name	Reactivity	Expression System	Application
P10048	HLA-G/B2M/RIIPRLHLQL Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, IA, SPR
P10148	HLA-A/B2M/GVYDGREHTV Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9774	HLA-A/B2M/GVYDGREHTV Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10149	HLA-A/B2M/YLEPGPVTA Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9875	HLA-A/B2M/YLEPGPVTA Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10030	HLA-A/B2M/SLLMWITQC Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10052	HLA-A/B2M/SLLMWITQC Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SPR
P10047	HLA-E/B2M/VMAPRTLVL Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SPR
P9766	HLA-A/B2M/FMNKFIYEI Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P9767	HLA-A/B2M/FMNKFIYEI Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9755	HLA-A/B2M/SLLMWITQV Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9754	HLA-A/B2M/SLLMWITQV Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9828	HLA-A/B2M/CLGGLTMV Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9998	HLA-A/B2M/CLGGLTMV Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9822	HLA-A/B2M/HMTEVVRHC Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9821	HLA-A/B2M/HMTEVVRHC Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P9792	HLA-A/B2M/VVVGAVGVGK Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, SDS-PAGE, SPR
P9791	HLA-A/B2M/VVVGAVGVGK Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE, SPR
P10122	HLA-A/B2M/RMFPNAPYL Monomer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SPR
P10289	HLA-A/B2M/RMFPNAPYL Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SPR

Immune Checkpoint Proteins

Catalog No.	Product Name	Reactivity	Expression System	Application
P10095	CD22 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10096	CD22 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10139	CD33 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10175	CD33 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10166	EGFR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SPR
P10170	EGFR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10255	EGFR (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10133	ERBB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10273	ERBB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10090	FOLH1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10105	GPC3 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10003	HER2/ERBB2 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9966	PSMA/FOLH1 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA

Immune Checkpoint Proteins

Catalog No.	Product Name	Reactivity	Expression System	Application
P10082	TNFRSF17 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10237	TNFRSF17 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10256	TNFRSF17 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9866	TNFRSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE
P10083	TNFRSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P10131	TNFSF8 (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA
P9804	TNFSF8 Tetramer (Human) Recombinant Protein	Human	Mammalian cell (HEK293)	Functional Study, ELISA, SDS-PAGE

Others

Catalog No.	Product Name	Reactivity	Preparation Method	Application
P9952	CSF2 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9948	EGF (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9949	FGF1 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9950	FGF2 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9951	FLT3LG (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9956	IL10 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9953	IL3 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9954	IL4 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9955	IL6 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9947	INHBA (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9958	KITLG (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9957	NOG (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9959	TGFB1 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9960	THPO (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE
P9946	TNFSF9 (Human) Recombinant Protein	Human	Escherichia coli	Functional Study, SDS-PAGE

GMP Grade Recombinant Proteins

Abnova also offers GMP-grade recombinant proteins to support cell therapy manufacturers with a consistent, safe, and traceable supply of reagents, minimize contamination risks, and ensure the highest quality of therapeutic cells.

IFNG (Human) Recombinant Protein

Catalog No.

P7003

Reactivity

Human

Preparation Method

E. coli expression system

Purity

> 97% by SDS-PAGE

Application

Functional Study, SDS-PAGE

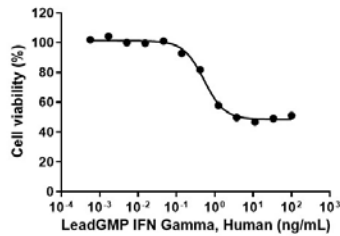
Endotoxin Level

< 0.05 EU/ug

Regulatory Status

GMP

Activity



The ED₅₀ for this effect is < 1 ng/mL, measured by the induction of cytotoxicity in HT29 cells. The specific activity of recombinant human IFN gamma is approximately > 1 x 10⁷ IU/mg, which is calibrated against the human IFN Gamma WHO Reference Material (NIBSC code: 87/586).

IL1B (Human) Recombinant Protein

Catalog No.

P6992

Reactivity

Human

Preparation Method

E. coli expression system

Purity

> 97% by SDS-PAGE

Application

Functional Study, SDS-PAGE

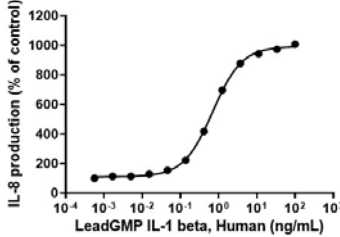
Endotoxin Level

< 0.05 EU/ug

Regulatory Status

GMP

Activity



The ED₅₀ for this effect is < 2.0 ng/mL, measured by the induction of IL-8 secretion in HT29 cells. The specific activity of recombinant human IL-1 beta is approximately > 5 x 10⁷ IU/mg, which is calibrated against the human IL-1 beta WHO International Standard (NIBSC code: 86/680).

IL2 (Human) Recombinant Protein

Catalog No.

P6993

Reactivity

Human

Preparation Method

E. coli expression system

Purity

> 97% by SDS-PAGE

Application

Functional Study, SDS-PAGE

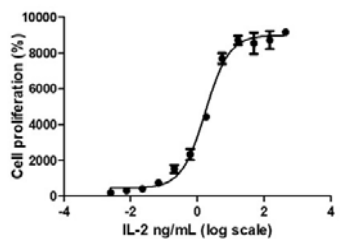
Endotoxin Level

< 0.05 EU/ug

Regulatory Status

GMP

Activity



The ED₅₀ for this effect is < 3 ng/mL, measured by the induction of proliferation in CTLL-2 cells. The specific activity of recombinant human IL-2 is > 5 x 10⁶ IU/mg, which is calibrated against the human IL-2 WHO International Standard (NIBSC code: 86/500).

IL7 (Human) Recombinant Protein

Catalog No.

P6997

Reactivity

Human

Preparation Method

E. coli expression system

Purity

> 97% by SDS-PAGE

Application

Functional Study, SDS-PAGE

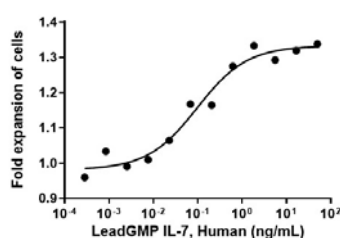
Endotoxin Level

< 0.05 EU/ug

Regulatory Status

GMP

Activity



The ED₅₀ for this effect is < 0.8 ng/mL, measured by the induction of PHA-activated human PBMCs proliferation. The specific activity of recombinant human IL-7 is > 1 x 10⁸ units/mg.

GMP Grade Recombinant Proteins

IL15 (Human) Recombinant Protein

Catalog No.
P6999

Reactivity
Human

Preparation Method
E. coli expression system

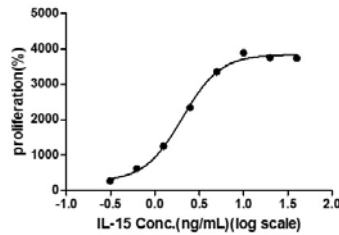
Purity
> 97% by SDS-PAGE

Application
Functional Study, SDS-PAGE

Endotoxin Level
< 0.05 EU/ug

Regulatory Status
GMP

Activity



The ED₅₀ for this effect is < 3 ng/mL, measured by the induction of proliferation in CTLL-2 cells. The specific activity of recombinant human IL-15 is > 2 × 10⁶ IU/mg, which is calibrated against the human IL-15 WHO International Standard (NIBSC code: 95/554).

IL18 (Human) Recombinant Protein

Catalog No.
P7000

Reactivity
Human

Preparation Method
E. coli expression system

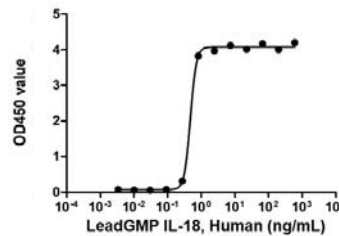
Purity
> 97% by SDS-PAGE

Application
Functional Study, SDS-PAGE

Endotoxin Level
< 0.05 EU/ug

Regulatory Status
GMP

Activity



The ED₅₀ for this effect is < 6 ng/mL, measured by the induction of IFN gamma secretion in KG-1 cells. The specific activity of recombinant human IL-18 is > 1 × 10⁷ IU/mg, which is calibrated against the human IL-18 WHO Reference Reagent (NIBSC code: 03/200).

IL21 (Human) Recombinant Protein

Catalog No.
P7001

Reactivity
Human

Preparation Method
E. coli expression system

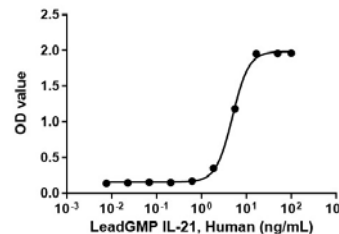
Purity
> 97% by SDS-PAGE

Application
Functional Study, SDS-PAGE

Endotoxin Level
< 0.05 EU/ug

Regulatory Status
GMP

Activity



The ED₅₀ for this effect is < 10 ng/mL, measured by the enhance IFN gamma secretion in NK-92 cells.

TNF (Human) Recombinant Protein

Catalog No.
P7004

Reactivity
Human

Preparation Method
E. coli expression system

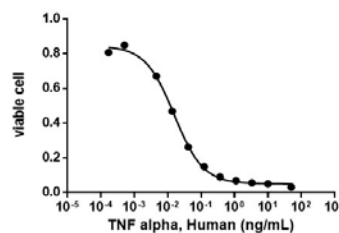
Purity
> 97% by SDS-PAGE

Application
Functional Study, SDS-PAGE

Endotoxin Level
< 0.05 EU/ug

Regulatory Status
GMP

Activity



The ED₅₀ for this effect is < 0.1 ng/mL, measured by the induction of cytotoxicity in L929 cells in the presence of actinomycin D. The specific activity of recombinant human TNF alpha is approximately ≥ 1 × 10⁷ IU/mg, which is calibrated against the human TNF Alpha WHO International Standard (NIBSC code: 12/154).

Humanized Antibodies

Abnova is at the forefront of advancing cell therapy research with our high-quality humanized antibodies. Our humanized antibodies offer superior specificity and reduced immunogenicity, making them ideal for various therapeutic applications, including targeted therapy, immunomodulation, cell surface marker detection, and drug delivery.

Catalog No.	Product Name	Reactivity	Application
RAB01123-M01J	4-1BB humanized monoclonal antibody, clone D2D	Human	Flow Cyt, WB-Ce, WB-Re, ELISA
RAB07809-M01J	4-1BB scFv-hlgG1 humanized monoclonal antibody	Human	Flow Cyt
RAB01069-M01J	CD3 humanized monoclonal antibody, clone H2L2	Human	Flow Cyt, SPR
RAB01127-M02J	CD4 humanized monoclonal antibody, clone 220FA	Human	Flow Cyt
RAB01127-M01J	CD4 humanized monoclonal antibody, clone E1H	Human	Flow Cyt
RAB01120-M01J	CD8A VHH-hlgG1 humanized monoclonal antibody, clone A1	Human	Flow Cyt
RAB01120-M02J	CD8A VHH-hlgG1 humanized monoclonal antibody, clone A9	Human	Flow Cyt
RAB01120-M03J	CD8A VHH-hlgG1 humanized monoclonal antibody, clone B5	Human	Flow Cyt
RAB01070-M01J	CDH11 humanized monoclonal antibody, clone 1A9	Human	Flow Cyt, WB-Re, IHC-P, ELISA
RAB01124-M01J	CD28 humanized monoclonal antibody, clone O5H	Human	Flow Cyt, WB-Ce, ELISA
RAB07810-M01J	CD28 scFv-hlgG1 humanized monoclonal antibody	Human	Flow Cyt
RAB01126-M01J	CD40 humanized monoclonal antibody, clone 6EOG	Human	Flow Cyt, WB-Ce, WB-Re, ELISA
RAB07811-M01J	CD40 scFv-hlgG1 humanized monoclonal antibody	Human	Flow Cyt
RAB01125-M01J	CD45RA humanized monoclonal antibody, clone C1D	Human	Flow Cyt, WB-Re, ELISA

Cell Culture Media

Abnova's Cell Culture Media, are tailored for various mammalian cell types and applications. Our media support the *ex vivo* expansion of immune cells and stem cells, crucial for cell therapy development and biomedical research.

Catalog No.	Product Name	Form
U0614	RPMI-1640 Medium	Lyophilized
U0604	Dulbecco's Modified Eagle's Medium (High glucose)	Lyophilized
U0605	DMEM/F12 Medium	Lyophilized
U0606	DMEM/F12 Medium	Lyophilized
U0607	Minimum Essential Medium	Lyophilized
U0608	MEM-alpha Medium	Lyophilized
U0609	Iscove's Modified Dulbecco's Medium	Lyophilized
U0610	M199 Medium	Lyophilized
U0611	McCoy's 5A Medium	Lyophilized
U0612	Ham's F-12 Medium	Lyophilized
U0613	Ham's F-12K Medium	Lyophilized

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