

CD86, Human, Recombinant, 0.1 mg

Catalog Number 5096

DESCRIPTION

Human CD86 gene encodes a type I membrane protein that is a member of the immunoglobulin superfamily. This protein is expressed by antigen-presenting cells, and it is the ligand for two proteins at the cell surface of T cells, CD28 antigen and cytotoxic T-lymphocyte associated protein 4. Binding of this protein with CD28 antigen is a costimulatory signal for activation of the T-cell. Binding of this protein with cytotoxic T-lymphocyte-associated protein 4 negatively regulates T-cell activation and diminishes the immune response. Alternative splicing results in several transcript variants encoding different isoforms. Recombinant CD86 may service as coating matrix protein for studying of T cell functions *in vitro*.

Full-length human CD86 extracellular domain cDNA (24 - 247 aa, Isoform-2) was constructed with 31 N-terminal T7/His tag and expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified as soluble protein.

CHARACTERISTICS

Parameter, Testing, and Method	CD86, Human, Recombinant Catalog # 5096
Quantity	0.1 mg (100 µg/vial)
Volume	0.1 mL
Concentration	1 mg/mL
Purity	≥90% as measured by SDS PAGE
Formulation	Formulated in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, L-Arginine, DTT and Glycerol.
Form	Solution
Production Type	Recombinant – <i>E. coli</i>
Storage Temperature	Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days
Shelf Life	12 months after receipt
Sterilization Method	Filtration
Cell Attachment Activity	Passes
Sterility	No growth

Accession No.	NP_008820
Recombinant Sequence	MASMTGGQQMGRGHHHHHHGNLYFQGGELVVFWDQDENLVNEVYLGKEKFDVSHSKYMGRTSFDSDSWTLRLHNLQIKDKGLYQCIIHKKKPTGMIRIHQMNSLSVLNFSQPEIVPISNITENVYINLTCSSIHGYPEPKKMSVLLRSTIEYDGIMQKSQDNVTELYDVSISLSVSFPDVTSNMTIFCILETDKTRLLSSPFIELEDPPDPHIP

APPLICATIONS

This product is for R&D use only and is not intended for human or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

INSTRUCTIONS FOR USE

Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.

1. Thaw CD86 and dilute to desired concentration using serum-free medium or PBS. The final solution should be sufficiently dilute so that the volume added covers the surface evenly.
2. Add appropriate amount of diluted material to culture surface.
3. Incubate at room temperature for approximately 1 – 2 hours.
4. Aspirate remaining material.
5. Rinse plates carefully with dH₂O– avoid scratching bottom surface of plates.
6. Plates are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

Note: Coating this recombinant protein at 1-10 µg / well (6 well plate) in T cell specific medium can be used as a coating matrix protein for human T cell/ Receptor interaction or as a highly purified recombinant antigen, it may be used as culture matrix protein for T cells differentiation regulation study *in vitro*.

REFERENCES

- (1) Morgado, P., et al., Toxoplasma gondii induces B7-2 expression through activation of JNK signal transduction. Infect. Immun. 79 (11), 4401-4412 (2011)

- (2) Nukada, Y., et al. The relationship between CD86 and CD54 protein expression and cytotoxicity following stimulation with contact allergen in THP-1 cells. J Toxicol Sci 36 (3), 313-324 (2011)

- (3) Qureshi, O.S., et al., Trans-endocytosis of CD80 and CD86: a molecular basis for the cell-extrinsic function of CTLA-4. Science 332 (6029), 600-603 (2011)