

Recombinant Human CD28 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50152

Size: 10ug, 100ug

Protein Name: T-cell-specific surface glycoprotein CD28 (TP44) (CD antigen CD28)

Synonym: CD28

UniProt ID: P10747

UniProt Link: www.uniprot.org/uniprotkb/P10747/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 220 AA

Molecular Weight: 25 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLRLLLALNLFPSIQVTGNKILVKQSPMLVAYDNAVNLSCKYSYNLFSREFRASLHKGLDSAVEVCVV
YGNYSQQLQVYSKTGFNCDGKLGNESVTFYLNLYVNQTDIYFCKIEVMYPPPYLDNEKSNGTIIHV
KGKHLCPSPFLPGPSKPFVVLVVVGGVLACYSLLVTVAFIIFWVRSKRSLHSDYMNMTPRRPGPT
RKHYQPYAPPRDFAAYRS

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant T-cell-specific surface glycoprotein CD28 (TP44) (CD antigen CD28) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Receptor that plays a role in T-cell activation, proliferation, survival and the maintenance of immune homeostasis (PubMed:1650475, PubMed:7568038). Functions not only as an amplifier of TCR signals but delivers unique signals that control intracellular biochemical events that alter the gene expression program of T-cells (PubMed:24665965). Stimulation upon engagement of its cognate ligands CD80 or CD86 increases proliferation and expression of various cytokines in particular IL2 production in both CD4(+) and CD8(+) T-cell subsets (PubMed:12196291, PubMed:1650475, PubMed:35397202). Mechanistically, ligation induces recruitment of protein kinase C- θ /PRK θ C and GRB2 leading to NF- κ -B activation via both PI3K/Akt-dependent and -independent pathways (PubMed:21964608, PubMed:24665965, PubMed:7568038). In conjunction with TCR/CD3 ligation and CD40L costimulation, enhances the production of IL4 and IL10 in T-cells (PubMed:8617933).; [Isoform 3]: Enhances CD40L-mediated activation of NF- κ -B and kinases MAPK8 and PAK2 in T-cells (PubMed:15067037).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein.; [Isoform 3]: Cell surface .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.