

Recombinant Human CD6 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50160

Size: 10ug, 100ug

Protein Name: T-cell differentiation antigen CD6 (T12) (TP120) (CD antigen CD6) [Cleaved into: Soluble CD6]

Synonym: CD6

UniProt ID: P30203

UniProt Link: www.uniprot.org/uniprotkb/P30203/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 668 AA

Molecular Weight: 72 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MWLFFGITGLLTAALSGHPSPAPPDQLNTSSAESELWEPGERLPVRLTNGSSSSCSGTVEVRLEASW
EPACGALWDSRAAEAVCRALGCGGAEAAASQLAPPTPELPPPPAAGNTSVAANATLAGAPALLCSGA
EWRLCEVVEHACRSDGRRARVTCAENRALRLVDGGGACAGRVEMLEHGEWGSVCDDTDWLEDA
HVVCRLQCGWAVQALPGLHFTPGRGPIHRDQVNCSGAEAYLWDCPGLPGQHYCGHKEDAGAVC
SEHQSWRLTGGAADRCEGQVEVHFGRGVWNTVCDSEWYPSEAKVLCQSLGCGTAVERPKGLPHSL
GRMYSCNGEELTSLNCSWRFNNSNLCSQSLAARVLCASRSLHNLSTPEVPASVQTVTISSVTV
KIENKESRELMLLIPSIVLGIILLGSLIFIAFILLRIKGKYALPVMVNHQHLPTTIPAGSNSYQVPITIPKE
VFMLPIQVQAPPPEDSDSGSDSDYEHYDFSAQPPVALTTFYNSQRHRVTDDEEVQQSRFQMPPLEE
GLEELHASHIPTANPGHCITDPPSLGPQYHPRSNSSESSTSSGEDYCNSPKSKLPPWNPQVFSSERS
SFLEQPPNLELAGTQPAFSAGPPADDSSSTSSGEWYQNFQPPPQPPSEEQFGCPGSPSPQPDSTD
NDDYDDISAA

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 differentiation antigen CD6 (T12) (TP120) (CD antigen CD6) [Cleaved into: Soluble CD6] 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: Cell adhesion molecule that mediates cell-cell contacts and regulates T-cell responses via its interaction with ALCAM/CD166 (PubMed:15048703, PubMed:15294938, PubMed:16352806, PubMed:16914752, PubMed:24584089, PubMed:24945728). Contributes to signaling cascades triggered by activation of the TCR/CD3 complex (PubMed:24584089). Functions as a costimulatory molecule; promotes T-cell activation and proliferation (PubMed:15294938, PubMed:16352806, PubMed:16914752). Contributes to the formation and maturation of the immunological synapse (PubMed:15294938, PubMed:16352806). Functions as a calcium-dependent pattern receptor that binds and aggregates both Gram-positive and Gram-negative bacteria. Binds both lipopolysaccharide (LPS) from Gram-negative bacteria and lipoteichoic acid from Gram-positive bacteria (PubMed:17601777). LPS binding leads to the activation of signaling cascades and downstream MAP kinases (PubMed:17601777). Mediates activation of the inflammatory response and the secretion of pro-inflammatory cytokines in response to LPS (PubMed:17601777).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Note=Detected at the immunological synapse, i.e., at the contact zone between antigen-presenting dendritic cells and T-cells (PubMed:15294938, PubMed:16352806). Colocalizes with the TCR/CD3 complex at the immunological synapse (PubMed:15294938).; [Soluble CD6]: Secreted . Note=The origins of the secreted form are not clear, but it might be created by proteolytic shedding of the ectodomain.

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.