

Recombinant Human TAB1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50943

Size: 10ug, 100ug

Protein Name: TGF-beta-activated kinase 1 and MAP3K7-binding protein 1 (Mitogen-activated protein kinase kinase kinase 7-interacting protein 1) (TGF-beta-activated kinase 1-binding protein 1) (TAK1-binding protein 1)

Synonym: TAB1, MAP3K7IP1

UniProt ID: Q15750

UniProt Link: www.uniprot.org/uniprotkb/Q15750/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 504 AA

Molecular Weight: 55 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAAQRRLQLQSEQQPSWTDDLPLCHLSGVGSASNRSYSADGKGTESHPPEDSWLKFRSENNCFLY
GVFNGYDGNRVTNFVAQRLSAELLGQLNAEHAEADVRRVLLQAFDVVERSFLSIDDALAEKASLQ
SQLPEGVPQHQLPPQYQKILERLKLTEREISGGAMAVVAVLLNNKLYVANVGTRALLCKSTVDGLQ
VTQLNVDHTTENEDELFRLSQLGLDAGKIKQVGIIQGQESTRRIGDYKVYGYTDIDLLSAAKSKPIAE
PEIHGAQPLDGVTGFLVLMSEGLYKALEAAHGPQGQANQEIAAMIDTEFAKQTSLEDAVAQAVVDRVKR
IHSDTFASGGERARFCPRHEDMTLLVRNFGYPLGEMSQPTPSPAPAAGGRVYPVSVVPYSSAQSTSK
TSVTLSLVMP SQGMVNGAHSASTLDEATPTLTNQSPTLTLQSTNTHTQSSSSSDGGLFRSRPAH
SLPPGEDGRVEPYVDFAEFYRLWSVDHGEQSVVTAP

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 TGF-beta-activated kinase 1 and MAP3K7-binding protein 1 (Mitogen-activated protein kinase kinase kinase 7-interacting protein 1) (TGF-beta-activated kinase 1-binding protein 1) (TAK1-binding protein 1) 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: Key adapter protein that plays an essential role in JNK and NF-kappa-B activation and proinflammatory cytokines production in response to stimulation with TLRs and cytokines (PubMed:22307082, PubMed:24403530). Mechanistically, associates with the catalytic domain of MAP3K7/TAK1 to trigger MAP3K7/TAK1 autophosphorylation leading to its full activation (PubMed:10838074, PubMed:25260751, PubMed:37832545). Similarly, associates with MAPK14 and triggers its autophosphorylation and subsequent activation (PubMed:11847341, PubMed:29229647). In turn, MAPK14 phosphorylates TAB1 and inhibits MAP3K7/TAK1 activation in a feedback control mechanism (PubMed:14592977). Also plays a role in recruiting MAPK14 to the TAK1 complex for the phosphorylation of the TAB2 and TAB3 regulatory subunits (PubMed:18021073).

Subcellular Localization: Cytoplasm, cytosol . Endoplasmic reticulum membrane ; Peripheral membrane protein ; Cytoplasmic side . Note=Recruited to the endoplasmic reticulum following interaction with STING1.

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.