

Recombinant Human PTN6 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50820

Size: 10ug, 100ug

Protein Name: Tyrosine-protein phosphatase non-receptor type 6 (EC 3.1.3.48)
(Hematopoietic cell protein-tyrosine phosphatase) (Protein-tyrosine phosphatase 1C) (PTP-1C) (Protein-tyrosine phosphatase SHP-1) (SH-PTP1)

Synonym: PTPN6, HCP, PTP1C

UniProt ID: P29350

UniProt Link: www.uniprot.org/uniprotkb/P29350/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 595 AA

Molecular Weight: 68 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MVRWFHRDL SGLDAETLLKGRGVHGSFLARPSRKNQGD FLSVRVGDQVTHIRIQNSGDFYDLYG
GEKFATLT ELVEYYTQQQGV LQDRDGTIIHLKYPLNCSDPTSERWYHGHMSGGQAETLLQAKGEPW
TFLVRESLSQPGDFVLSV LSDQPKAGPGSPLRVTHIKVMCEGGRYTVGGLET FDSLTDLVEHF KKTG
IEEASGAFVYLRQPPYATR VNAADIENRVLELNKKQESED TAKAGFWEEFESLQKQEVKNLHQRLEG
QRPENKGNRYKNILPFDHSRVILQGRDSNIPGSDYINANYIKNQLLGPDENAKTYIASQGCLEATVN
DFWQMAWQENSRVIVMTT REVEKGRNKCVPYWPEVGMQRAYGPYSVTNCGEHD TTEYKLRTLQV
SPLDNGDLIREIWHYQYLS WPDHGV PSEPGGVLSFLDQINQRQESLPHAGPIIVHCSAGIGRTGTIIVI
DMLMENISTKGLDCDIDI QKTIQM VRAQRSGMVQTEAQYKFIYVAIAQFIETTKKKLEVLQSQKGQES
EYGNITYPPAMKNAHAKASRTSSKHKEDVYENLHTKNKREEKVKKQRSADKEKSKGSLKRK

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 Tyrosine-protein phosphatase non-receptor type 6 (EC 3.1.3.48) (Hematopoietic cell protein-tyrosine phosphatase) (Protein-tyrosine phosphatase 1C) (PTP-1C) (Protein-tyrosine phosphatase SHP-1) (SH-PTP1) 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: Tyrosine phosphatase enzyme that plays important roles in controlling immune signaling pathways and fundamental physiological processes such as hematopoiesis (PubMed:14739280, PubMed:29925997). Dephosphorylates and negatively regulate several receptor tyrosine kinases (RTKs) such as EGFR, PDGFR and FGFR, thereby modulating their signaling activities (PubMed:21258366, PubMed:9733788). When recruited to immunoreceptor tyrosine-based inhibitory motif (ITIM)-containing receptors such as immunoglobulin-like transcript 2/LILRB1, programmed cell death protein 1/PDCD1, CD3D, CD22, CLEC12A and other receptors involved in immune regulation, initiates their dephosphorylation and subsequently inhibits downstream signaling events (PubMed:11907092, PubMed:14739280, PubMed:37932456, PubMed:38166031). Modulates the signaling of several cytokine receptors including IL-4 receptor (PubMed:9065461). Additionally, targets multiple cytoplasmic signaling molecules including STING1, LCK or STAT1 among others involved in diverse cellular processes including modulation of T-cell activation or cGAS-STING signaling (PubMed:34811497, PubMed:38532423). Within the nucleus, negatively regulates the activity of some transcription factors such as NFAT5 via direct dephosphorylation. Also acts as a key transcriptional regulator of hepatic gluconeogenesis by controlling recruitment of RNA polymerase II to the PCK1 promoter together with STAT5A (PubMed:37595871).

Subcellular Localization: Cytoplasm . Nucleus . Note=In neurons, translocates into the nucleus after treatment with angiotensin II (By similarity). Shuttles between the cytoplasm and nucleus via its association with PDPK1.

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.