

Recombinant Human PTPRE Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50824

Size: 10ug, 100ug

Protein Name: Receptor-type tyrosine-protein phosphatase epsilon (Protein-tyrosine phosphatase epsilon) (R-PTP-epsilon) (EC 3.1.3.48)

Synonym: PTPRE

UniProt ID: P23469

UniProt Link: www.uniprot.org/uniprotkb/P23469/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 700 AA

Molecular Weight: 81 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEPLCPLLLVGFSPLARALRGNETTADSNETTTTSGPPDPGASQPLLAWLLLPLLLLLLVLLLAAYFF
RFRKQRKAVVSTSDKKMPNGILEEQEQQRVMLLSRSPSGPKKYFPIPVEHLEEEIRIRSADDCKQFR
EEFNSLPSGHIQGT FELANKEENREKNRYPNILPNDHSRVILSQLDGIPCSDYINASYIDGYKEKNKFI
AAQGPKQETVND FWRMVWEQKSATIVMLTNLKERKEEKCHQYWPDQGCWTYGNIRVCVEDCVVL
VDYTIRKFCIQPQLPDGCKAPRLVSQLHFTSWPDFGVPFTPIGMLKFLKKVKTLPVHAGPIVVHCSA
GVGRTGT FIVIDAMMAMMHAEQKVDVFEFVSRI RNQRPQM VQTDMQYTFIYQALLEYYLYGDTELD
VSSLEKHLQTMHGTTTHFDKIGLEEEFRKLTNVRIMKENMRTGNLPANMKKARVIQIIPYDFNRVILSM
KRGQEYTDYINASFIDGYRQKD YFIATQG PLAHTVEDFWRM IWEWKSHTIVMLTEVQEREQDKCYQ
YWPTEGSVTHGEITIEIKNDTLSEAISIRDFLVT LNQPQARQEEQVRVVRQFHFGWPEIGIPAEGKG
MIDLIAAVQKQQQQTGNHPITVHCSAGAGRTGT FIALSNILERVKAEGLLDVFQAVKSLRLQRPHMVQ
TLEQYEF CYKVVQDFIDIFSDYANFK

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 Receptor-type tyrosine-protein phosphatase epsilon (Protein-tyrosine phosphatase epsilon) (R-PTP-epsilon) (EC 3.1.3.48) 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: Isoform 1 plays a critical role in signaling transduction pathways and phosphoprotein network topology in red blood cells. May play a role in osteoclast formation and function (By similarity).; Isoform 2 acts as a negative regulator of insulin receptor (IR) signaling in skeletal muscle. Regulates insulin-induced tyrosine phosphorylation of insulin receptor (IR) and insulin receptor substrate 1 (IRS-1), phosphorylation of protein kinase B and glycogen synthase kinase-3 and insulin induced stimulation of glucose uptake (By similarity).; Isoform 1 and isoform 2 act as a negative regulator of FcεRI-mediated signal transduction leading to cytokine production and degranulation, most likely by acting at the level of SYK to affect downstream events such as phosphorylation of SLP76 and LAT and mobilization of Ca²⁺.

Subcellular Localization: [Isoform 1]: Cell membrane; Single-pass type I membrane protein.; [Isoform 2]: Cytoplasm. Note=Predominantly cytoplasmic. A small fraction is also associated with nucleus and membrane. Insulin induces translocation to the membrane (By similarity).; [Isoform 3]: Cytoplasm.

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.