

Recombinant Rat PTPRE Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52181

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, Ptpc

UniProt ID: B2GV87

UniProt Link: www.uniprot.org/uniprotkb/B2GV87/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 699 AA

Molecular Weight: 81 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEPFCPLLLASFSLSLATAGQGNDTTPTESNWTSTTAGPPDPGTSQPLLTWLLPLLLLLFLLAAYFF
RFRKQRKAVVNSNDKKMPNGILEEQEQQRVMLLSRSPSGPKKYFPIPVHLEEEIRVRSADDCKRF
REEFNSLPSGHIQGT FELANKEENREKNRYPNLPNDHCRVILSQLDGIPCSDYINASYIDGYKEKNKF
IAAQGPKQETVND FWRMVWEQRSATIVMLTNLKERKEEKCYQYWPDQGCWTYGNIRVCVEDCVL
VDYTIRKFCIHPQLPDSCAPRLVSQLHFTSWPDFGVPFTPIGMLKFLKKVKTLPNPSHAGPIVVHCSA
GVGRTGTFIVIDAMMDMIHSEKQKVDVFEFVSRIRNQRPQMVQTDVQYTFIYQALLEYYLYGDTLDV
SSLERHLQTLHGTATHFDKIGLEEEFRKLTNVRIMKENMRTGNLPANMKKARVIQIIPYDFNRVILSMK
RGQEFTDYINASFDGYRQKDYFMATQGPLAHTVEDFWRMVWEWKSHITIVMLTEVQEREQDKCYQ
YWPTGSGVTHGDITIEIKSDTLSEAISIRDFLVTFKQPLARQEEQVRMVRQFHFGWPEVGIPTEGKG
MIDLIAAVQKQQQQTGNHPITVHCSAGAGRTGTFIALSNILERVKAEGLLDVFQAVKSLRLQRPHMVQ
TLEQYEFQYKVVQDFIDIFSDYANFK

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). Acts as a negative regulator of insulin receptor (IR) signaling and is involved in insulin-induced glucose metabolism mainly through direct dephosphorylation and inactivation of IR in hepatocytes and liver.; 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 can induce 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.