

Recombinant Human PTN22 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50819

Size: 10ug, 100ug

Protein Name: Tyrosine-protein phosphatase non-receptor type 22 (EC 3.1.3.48)
(Hematopoietic cell protein-tyrosine phosphatase 70Z-PEP) (Lymphoid phosphatase) (LyP)
(PEST-domain phosphatase) (PEP)

Synonym: PTPN22, PTPN8

UniProt ID: Q9Y2R2

UniProt Link: www.uniprot.org/uniprotkb/Q9Y2R2/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 807 AA

Molecular Weight: 92 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MDQREILQKFLDEAQSCKITKEEFANEFLKLKRQSTKYKADKTYPTTVAEKPKNIKKNRYKDILPYDYS
RVELSLITSDEDSSYINANFIKGVYGPKAYIATQGPLSTTLDFWRMIWEYSVLIIVMACMEYEMGKKK
CERYWAEPGEMQLEFGPFSVSCEAEKRKSDYIIRTLKVKFNSETRTIYQFHYKNWPDHDPSSIDPIL
ELIWDVRCYQEDDSVPICIHCSAGCGRTGVICAIDYTWMLLKDGIIPENFSVFLIREMRTQRPSLVQT
QEYELVYNVAVLELFKRQMDVIRDKHSGTESQAKHCIPKHNHTLQADSYSPNLPKSTTKAAKMMNQ
QRTKMEIKESSSDFRTSEISAKEELVLHPAKSSTSDFLELNYSFDKNADTTMKWQTKAFPIVGEPL
QKHQSLDLGSLLFEGCSNSKPVNAAGRYFNSKVPITRTKSTPFELIQRETKEVDSKENFSYLESQP
HDSCFVEMQAQKVMHVSSAELNYSPLPYDSKHQIRNASNVKHHDSALGVYSYIPLVENPYFSSWPP
SGTSSKMSLDLPEKQDGTVPSSLLPTSSTSLFSYYNSHDSLSLNSPTNISLLNQESAVLATAPRID
DEIPPLPVRTPESFIVVEEAGEFSPNVPKSLSSAVKVKIGTSLEWGGTSEPKKFDDSVILRPSKSVKL
RSPKSELHQDRSSPPPPLPERTLESFFLADEDCMQAQSIETYSTSYPDTEMENSTSSKQTLKTPGKSF
TRSKSLKILRNMKKSICNSCPPNKAESVQSNSSSFLNFGFANRFSKPKGPRNPPTWNI

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 22 (EC 3.1.3.48) (Hematopoietic cell protein-tyrosine phosphatase 70Z-PEP) (Lymphoid phosphatase) (LyP) (PEST-domain phosphatase) (PEP) 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: Acts as a negative regulator of T-cell receptor (TCR) signaling by direct dephosphorylation of the Src family kinases LCK and FYN, ITAMs of the TCRz/CD3 complex, as well as ZAP70, VAV, VCP and other key signaling molecules (PubMed:16461343, PubMed:18056643). Associates with and probably dephosphorylates CBL. Dephosphorylates LCK at its activating 'Tyr-394' residue (PubMed:21719704). Dephosphorylates ZAP70 at its activating 'Tyr-493' residue (PubMed:16461343). Dephosphorylates the immune system activator SKAP2 (PubMed:21719704). Positively regulates toll-like receptor (TLR)-induced type 1 interferon production (PubMed:23871208). Promotes host antiviral responses mediated by type 1 interferon (By similarity). Regulates NOD2-induced pro-inflammatory cytokine secretion and autophagy (PubMed:23991106). Acts as an activator of NLRP3 inflammasome assembly by mediating dephosphorylation of 'Tyr-861' of NLRP3 (PubMed:27043286). Dephosphorylates phospho-anandamide (p-AEA), an endocannabinoid to anandamide (also called N-arachidonoyl ethanolamide) (By similarity).

Subcellular Localization: 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.