

Recombinant Human PTPRC Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50822

Size: 10ug, 100ug

Protein Name: Receptor-type tyrosine-protein phosphatase C (EC 3.1.3.48) (Leukocyte common antigen) (L-CA) (T200) (CD antigen CD45)

Synonym: PTPRC, CD45

UniProt ID: P08575

UniProt Link: www.uniprot.org/uniprotkb/P08575/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1306 AA

Molecular Weight: 147 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTMYLWLKLLAFGFAFLDTEVFVTGQSPTPSPTGLTTAKMPSPVPLSSDPLPHTTAFSPASTFEREN
DFSETTTSLSPDNTSTQVSPDSLNDNASAFNTTGVSSVQTPHLPTHADSQTPTSAGTDTQTFSGSAAN
AKLNPTPGSNAISDVPGERSTASTFPTDPVSPLTTTSLAHHSSAALPARTSNTTITANTSDAYLNASE
TTTSPSGSAVISTTTIATTPSKPTCDEKYANITVDYLYNKETKLFTAKLNVNENVECGNNTCTNNEVH
NLTECKNASVSISHNSCTAPDKTLILDVPPGVEKFQLHDCTQVEKADTTICLKWKNIETFTCDTQNITY
RFQCGNMIFDNKEIKLENLEPEHEYKCDSEILYNNHKFTNASKIIKTDFGSPGEPQIIFCRSEAAHQGVI
TWNPPQRSFHNFTLCYIKETEKDCLNLDKNLIKYDLQNLKPYTKYVLSLHAYIIAKVQRNGSAAMCHF
TTKSAPPSQVWNMTVSMTSDNSMHVKCRPPRDRNGPHERYHLEVEAGNTLVRNESHKNCDFRVK
DLQYSTDYTFKAYFHNGDYPGEPFILHHSTSYNSKALIAFLAFLIIVTSIALLVVLYKIYDLHKKRSCNLD
EQQELVERDDEKQLMNVEPIHADILLETYKRKIADEGRFLAEFQSIPRVFSKFPIKEARKPFNQKNR
YVDILPYDYNRVELSEINGDAGSNYINASYIDGFKEPRKYIAAQGPRDETVDDFWRMIWEQKATVIVM
VTRCEEGRNRNKCAEYWPSMEEGTRAFGDVVVKINQHKRCPDYIIQKLNIVNKKEKATGREVTHIQFT
SWPDHGVPEDPHLLLKLRRRVNAFSNFFSGPIVVHCSAGVGRTGTYIGIDAMLEGLEAENKVDVYGY
VVKLRRQRCLMVQVEAQYILIHQALVEYNQFGETEVLSELHPYLHNMMKKRDPPSEPSPLEAEFQRL
PSYRSWRTQHIGNQEENKSKNRNSNVIPYDYNRVPLKHELEMSKESEHDSDESSDDSDSEEPSK
YINASFIMSYWKPEVMIAAQGPLKETIGDFWQMIFQRKVKVIVMLTELKHGDQEICAQYWGEQKQTY
GDIEVDLKDSDKSSTYTLRVFELRHRSKRKDSRTVYQYQYTNWSVEQLPAEPKELISMIQVVKQKLPQ
KNSSEGKHHKSTPLLIHCRDGSQQTGIFCALLNLLESAETEEVVDIFQVVKALRKARPGMVSTFEQY



QFLYDVIASTYPAQNGQVKKNHVEDKIEFDNEVDKVKQDANCVNPLGAPEKLPEAKEQAEGSEPT
SGTEGPEHSVNGPASPALNQGS

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 C (EC 3.1.3.48) (Leukocyte common antigen) (L-CA) (T200) (CD antigen CD45) 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: Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:35767951). Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity). Interacts with CLEC10A at antigen presenting cell-T cell contact; CLEC10A on immature dendritic cells recognizes Tn antigen-carrying PTPRC/CD45 receptor on effector T cells and modulates T cell activation threshold to limit autoreactivity.; (Microbial infection) Acts as a receptor for human cytomegalovirus protein UL11 and mediates binding of UL11 to T-cells, leading to reduced induction of tyrosine phosphorylation of multiple signaling proteins upon T-cell receptor stimulation and impaired T-cell proliferation.

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Membrane raft . Synapse . Note=Colocalized with DPP4 in membrane rafts.

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.