Recombinant Human ACP1/LMW-PTP Protein (GST Tag)

Catalog Number: PKSH031337

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

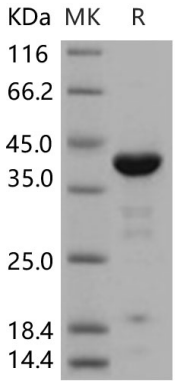
Description

Species	Human
Source	E.coli-derived Human ACP1/LMW-PTP protein Met 1-His 158, with an N-terminal GST
Calculated MW	44.3 kDa
Observed MW	40 kDa
Accession	AAI06012.1
Bio-activity	Measured by its ability to cleave a substrate, pNitrophenyl phosphate (pNPP). The specific activity is > 65, 000 pmol/min/μg.

Properties

Purity	> 88 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 150mM NaCl, pH 8.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

The low molecular weight phosphotyrosine phosphatase (LMW-PTP), also known as Acid phosphatase 1 (ACP1), belongs to the low molecular weight phosphotyrosine protein phosphatase family are involved in the regulation of important physiological functions, including stress resistance and synthesis of the polysaccharide capsule. ACP1/LMW-PTP is an enzyme involved in platelet-derived growth factor-induced mitogenesis and cytoskeleton rearrangement. LMW-PTP is able to specifically bind and dephosphorylate activated PDGF receptor, thus modulating PDGF-induced mitogenesis. In vitro, LMW-PTP was found to efficiently dephosphorylate activated FcgammaRIIA and LAT, but not Syk or phospholipase Cgamma2. The overexpression of LMW-PTP inhibited activation of Syk downstream of FcgammaRIIA and reduced intracellular Ca(2+) mobilization. It been demonstrated that LMW-PTP is responsible for FcgammaRIIA dephosphorylation, and is implicated in the down-regulation of cell activation mediated by this ITAM-bearing immunoreceptor. In addition, ACP1 is a highly polymorphic phosphatase that is especially abundant in the central nervous system and is known to be involved in several signal transduction pathways.

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