Datasheet for ABIN7317711

ACP1 Protein (GST tag)

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Overview

Quantity:	100 µg
Target:	ACP1
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This ACP1 protein is labelled with GST tag.

Product Details

Purpose:	Recombinant Human ACP1/LMW-PTP Protein (GST Tag)(Active)
Sequence:	Met 1-His 158
Characteristics:	A DNA sequence encoding human ACP1 (AAI06012.1) (Met 1-His 158) was fused with the GST tag at the N-terminus.
Purity:	> 88 % as determined by reducing SDS-PAGE.
Biological Activity Comment:	Measured by its ability to cleave a substrate, pNitrophenyl phosphate (pNPP). The specific activity is >65,000 pmol/min/µg.

Target Details

Target:	ACP1
Alternative Name:	ACP1/LMW-PTP (ACP1 Products)

Target Details

Background:	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. Synonym: HAAP,Low Molecular Weight Phosphotyrosine Protein Phosphatase, LMW-PTP, LMW-PTPase, Adipocyte Acid Phosphatase, Low Molecular Weight Cytosolic Acid Phosphatase, Red Cell Acid Phosphatase 1, ACP1
Molecular Weight:	44.3 kDa

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 50 mM Tris, 150 mM NaCl, pH 8.0
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.