

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat LMW-PTP/ACP1 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human LMW-PTP/ACP1 Ala2-His158 Accession # P24666
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

LMW-PTP (Low Molecular Weight Protein Tyrosine Phosphatase; also Red cell acid phosphatase 1/ACP1, HCPTP, and HAAP/Adipocyte acid phosphatase) is a 17-18 kDa member of the LMWPTP family, PTP superfamily of enzymes. It is widely expressed, being found in cells diverse as B and T cells, endothelial cells and vascular smooth muscle cells. LMW-PTP dephosphorylates multiple substrates, often in a cell-dependent manner. Among the substrates for LMW-PTP include PDGRβ, EphA2 and β-catenin. PMW-PTP is found intracellularly, generally associated with two cytoplasmic pools, one in the cytosol and the other accompanying the cytoskeleton. Human LMW-PTP is 158 amino acids (aa) in length. The catalytic region spans aa 9-154, and there are two acetylation sites at Ala2 and Lys156. Phosphorylation on Tyr132 and Tyr133 occurs on cytoskeleton-associated LMW-PTP, and has the effect of increasing its phosphatase activity. There are three alternative splice variants reported for LMW-PTP. One shows a 34 aa substitution for aa 41-74, a second shows a deletion of aa 41-74, while a third contains a 35 aa substitution for aa 78-158. The last two isoforms may function as negative regulators of LMW-PTP activity. Full-length LMW-PTP shares 86% aa sequence identity with mouse LMW-PTP.

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