

PRL-1/PTP4A1 Protein, Human, Recombinant (His)

General Information

Synonyms:	PTPCAAX1;PRL1;PRL-1;PTP(CAAXI);PTP4A1
Protein Construction:	Met1-Cys170
Species:	Human
Expression Host:	E. coli
Accession:	Q93096
Molecular Weight:	20.56 kDa (predicted) same as Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as 0.22 μm filtered solution in 20 mM Tris, 250 mM NaCl, 1 mM DTT, 20% Glycerol (pH 7.4).

Preparation and Storage

Stability & Storage:

It is recommended to store the product under sterile conditions at -70°C or lower. Samples are stable for up to 12 months at -80°C. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Phosphatases of regenerating liver (PRL-1, PRL-2, and PRL-3, also known as PTP4A1, PTP4A2, and PTP4A3) control magnesium homeostasis through an association with the CNNM magnesium transport regulators. PRL-1 (PTP4A1) is a key molecule that activates tyrosine phosphorylation, which is important for cancer progression and metastasis.

Reference

Hardy S, et al. Magnesium-sensitive upstream ORF controls PRL phosphatase expression to mediate energy metabolism. Proc Natl Acad Sci U S A. 2019 Feb 19;116(8):2925-2934. doi: 10.1073/pnas.1815361116. Epub 2019 Feb 4. PMID: 30718434; PMCID: PMC6386685.

Song Q, et al. PTP4A3 Is a Prognostic Biomarker Correlated With Immune Infiltrates in Papillary Renal Cell Carcinoma. Front Immunol. 2021 Sep 23;12:717688. doi: 10.3389/fimmu.2021.717688. PMID: 34630392; PMCID: PMC8495008.

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