

P4HB active protein

P4HB Protein, Mouse, Recombinant (His Tag)

CATALOG #
AAA258189

HOST
HEK293 Cells

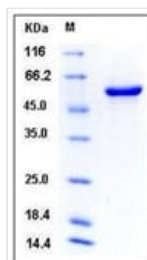
PRODUCT SYNONYMS

P4HB; P4HB Protein; Mouse; Recombinant (His Tag); Mouse P4HB/ERBA2L Protein (His Tag); ERp59 Protein; PDI Protein; Pdia1 Protein; Thbp Protein; prolyl 4-hydroxylase; beta polypeptide; P4HB active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. 5% trehalose, 5% mannitol and 0.01% Tween80
Sequence	Met1-Lys506
Source	Mouse
Bio Activity	Measured by its ability to promote aggregation of insulin in the presence of DTT. The specific activity is > 7.5 A650/min/mg
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Asp 20
Tag	C-His
Protein Construction	A DNA sequence encoding the mouse P4HB (NP_035162.1)(Met 1-Lys 506) was expressed, with a C-terminal polyhistidine tag.
Reconstitution	It is recommended that sterile water (400ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV-Vis.
Preparation and Storage	Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Stability: Samples are stable for up to twelve months from date of receipt at -70°C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for P4HB active protein	Background: Protein disulfide-isomerase, also known as Cellular thyroid hormone-binding protein, Prolyl 4-hydroxylase subunit beta, p55 and P4HB, is a peripheral membrane protein that belongs to the protein disulfide isomerase family. P4HB is highly abundant. In some cell types, it seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources. P4HB localizes near CD4-enriched regions on lymphoid cell surfaces. It is identified by mass spectrometry in melanosome fractions from stage I to stage IV. P4HB reduces and may activate fusogenic properties of HIV-1 gp12 surface protein, thereby enabling HIV-1 entry into the cell. P4HB catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, it seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. P4HB may therefore cause structural modifications of exofacial proteins. Inside the cell, it seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations, P4HB functions as a chaperone that inhibits aggregation of misfolded proteins. At low concentrations, it facilitates aggregation (anti-chaperone activity). P4HB may be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. It also acts as a structural subunit of various enzymes such as prolyl 4-hydroxylase and microsomal triacylglycerol transfer protein MTTP.
References	Kivirikko KI, et al., 1989, FASEB J., 3 (5): 1609-17. Pihlajaniemi T, et al.,1991, J Hepatol., 13, Suppl 3: S2 Fenouillet E., et al., 2001, J. Infect. Dis. 183:744-752. Gevaert K., et al., 2003, Nat. Biotechnol. 21:566-569. Barbouche R., et al., 2003, J. Biol. Chem. 278:3131-3136.

NCBI AND UNIPROT INFORMATION

NCBI GI #	42415475
NCBI GeneID	18453
NCBI Accession #	NP_035162.1
NCBI GenBank Nucleotide #	NM_011032.2
UniProt Accession #	P09103; Q922C8
Molecular Weight	Molecular Mass: The secreted recombinant mouse P4HB comprises 498 amino acids and has a calculated molecular mass of 56.2 kDa as estimated in SDS-PAGE under reducing conditions.
NCBI Official Full Name	protein disulfide-isomerase
NCBI Official Synonym Full Names	prolyl 4-hydroxylase, beta polypeptide
NCBI Official Symbol	P4hb
NCBI Official Synonym Symbols	PDI; Thbp; ERp59; Pdia1
NCBI Protein Information	protein disulfide-isomerase
UniProt Protein Name	Protein disulfide-isomerase
UniProt Gene Name	P4hb
UniProt Synonym Gene Names	Pdia1; PDI; ER protein 59; ERp59
UniProt Entry Name	PDIA1_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.