SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Rabbit Anti-P4HB/FITC Conjugated antibody

Catalog Number: SL1476R-FITC

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-P4HB/FITC
Immunogen:	KLH conjugated synthetic peptide derived from human PDI
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse(predicted:Rat,Chicken,Cow,Horse,Rabbit)
Background:	background: The three dimensional structure of many extracellular proteins is stabilized by the formation of disulphide bonds. Studies suggest that a microsomal enzyme known as Protein Disulphide Isomerase (PDI) is involved in disulphide-bond formation and isomerization, as well as the reduction of disulphide bonds in proteins. PDI, which catalyses disulphide interchange between thiols and protein dilsulphides, has also been referred to as thiol:protein-disulphide oxidoreductase and as glutathione:insulin transhydrogenase because of its role in reduction of disulphide bonds. The highly conserved sequence Lys-Asp-Glu-Leu (KDEL) is present at the carboxy-terminus of PDI and other soluble endoplasmic reticulum (ER) resident proteins including the 78 and 94 kDa glucose regulated proteins (GRP78 and GRP94 respectively). The presence of carboxy-terminal KDEL appears to be necessary for ER retention and appears to be sufficient to reduce the secretion of proteins from the ER. This retention is reported to be mediated by a KDEL receptor.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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	Function: This multifunctional protein catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. May therefore cause structural modifications of exofacial proteins. Inside the cell, seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations, functions as a chaperone that inhibits aggregation of misfolded proteins. At low concentrations, facilitates aggregation (anti-chaperone activity). May be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. Also acts a structural subunit of various enzymes such as prolyl 4-hydroxylase and microsomal triacylglycerol transfer protein MTTP. **Subunit:** Homodimer. Monomers and homotetramers may also occur. Also constitutes the structural subunit of prolyl 4-hydroxylase and of the microsomal triacylglycerol transfer protein MTTP in mammalian cells. Stabilizes both enzymes and retain them in the ER without contributing to the catalytic activity (By similarity). Binds UBQLN1. Binds to CD4, and upon HIV-1 binding to the cell membrane, is part of a P4HB/PDI-CD4-CXCR4-gp120 complex. **Subcellular Location:** Endoplasmic reticulum lumen. Melanosome. Cell membrane; Peripheral membrane protein (Potential). Note=Highly abundant. In some cell types, seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources (Probable). Localizes near CD4-enriched regions on lymphoid cell surfaces. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. **Tissue Specificity:** Detected in the flagellum and head region of spermatozoa (at protein level). **Similarity:** Belongs to the protein disulfide isomerase family. Contains 2 thioredoxin domains. **Database links:** **Entrez Gene:** 5034 Human **Entrez Gene:** 18453 Mouse **Entrez Gene:** 25506 Rat Omim: 176790 Human **SwissProt:** P07237 Human **SwissProt:** P09103 Mouse **SwissProt:** P04785 Rat **Unigene:** 464336 Human **Unigene:** 708779 Human **Unigene:** 16660 Mouse

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	Unigene: 392196 Mouse **Unigene:** 4234 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. Protein disulfide isomerase(PDI,Protein Disulfide lsomerase)is a dimeric protein with a subunit molecular weight of 57 kD,It is generally believed to participate in the formation of native disulfide bonds in intracellular proteins, catalyzing the exchange reaction between protein sulfhydryl groups and disulfide bonds.

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