

Recombinant Human Protein disulfide-isomerase /PDI Protein

Catalog No.: RP03210

Sequence Information

Species **Gene ID**
Human 5034

Swiss Prot **Tags**
P07237 C-His

Synonyms

P4HB, ERBA2L, PDI, PDIA1, PO4DB, Protein disulfide-isomerase

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as determined by SDS-PAGE.

Calculated MW **Observed MW**
54.94 kDa 60 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from 0.22μm filtered solution in PBS (pH 7.4).

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1–0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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.

Basic Information

Description

Recombinant Human Protein disulfide-isomerase/PDI Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp18-Lys505) of Human Protein disulfide-isomerase/PDI (Accession # P07237) fused with His tag at the C-terminus. .

Activity

Measured by its ability to promote aggregation of insulin in the presence of DTT. The specific activity is > 7.5 A650/min/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

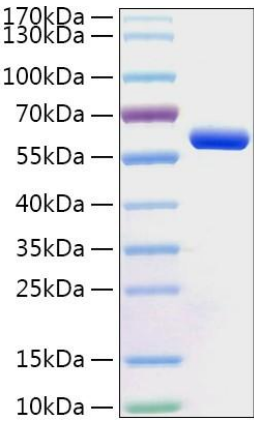
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Validation Data



Recombinant Human Protein disulfide-isomerase/PDI Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.