

Recombinant Human Protein Disulfide Isomerase

Information

Gene ID	
Accession #	
Alternate Names	Cellular Thyroid Hormone-binding Protein, Prolyl 4-hydroxylase Subunit beta, p55
Source	Escherichia coli.
M.Wt	Approximately 56.6 kDa, a single non-glycosylated polypeptide chain containing 502 amino acids. (MRGSGSHHHHHH-PDI).
AA Sequence	MRGSGSHHHH HHAPEEEDHV LVLKSNFAE ALAAHKYLLV EFYAPWCGHC KALAPEYAKA AGKLKAEGSE IRLAKVDATE ESDLAQQYGV RGYPTIKFFR NGDTASPKEY TAGREADDIV NWLKKRTGPA ATTLPDGAAG ESLVESSEVA VIGFFKDVES DSAKQLQAA EAIDDIPFGI TSNSDVFSKY QLDKDGVLV KKFDEGRNNF EGEVTKENLL DFIKHNQLPL VIEFTEQTAP KIFGGEIKTH ILLFLPKSVS DYDGKLSNFK TAAESFKGKI LFIFIDSDHT DNQRILEFFG LKKEECPAVR LITLEEEMTK YKPESEELTA ERITEFCHRF LEGKIKPHLM SQELPEDWDK QPVKVLVGKN FEDVAFDEKK NVFVEFYAPW CGHCKQLAPI WDKLGETYKD HENIVIAKMD STANEVEAVK VHSFPTLKFF PASADRTVID YNGERTLDGF KKFLES GGQD GAGDDDDLED LEEAEEP DME EDDDQKAVKD EL
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	100µg	500µg

Recombinant Human Protein Disulfide Isomerase	100µg	500µg
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Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/µg of rHuPDI as determined by LAL method.

Description

Protein disulfide isomerases (PDIs) constitute a family of structurally related enzymes which catalyze disulfide bonds formation, reduction, or isomerization of newly synthesized proteins in the lumen of the endoplasmic reticulum (ER). They act also as chaperones, and are, therefore, part of a quality-control system for the correct folding of the proteins in the same subcellular compartment. PDI has been found to have moderate effects (25-fold) on the rate of oxidative folding of proteins in vitro. Recombinant Human Protein Disulfide Isomerase is involved in disulphide-bond formation and isomerization, as well as the reduction of disulphide bonds in proteins. Recombinant PDI has been found to have moderate effects (25-fold) on the rate of oxidative folding of proteins in vitro.

Reference

1. Pihlajaniemi, T., T. Helaakoski, K. Tasanen, et al. 1987. EMBO J, 6: 643-9
2. Tasanen, K., T. Parkkonen, L.T. Chow, et al. 1988. J Biol Chem, 263: 16218-24
3. Wilkinson, B., and H.F. Gilbert. 2004. Biochim Biophys Acta, 1699: 35-44.

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