

Recombinant Human Protein Disulfide Isomerase

#R00489

Size: 100 µg/500 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

AA Sequence

MRGSGSHHHHHHAPEEEDHVLVLRKSNFAEALAAHK

YLLVEFYAPWCGHCKALAPEYAKAAGKLKAEGSEIRL
AKVDATEESDLAQQYGVRGYPTIKFFRNGDTASPKE
YTAGREADDIVNWLKKRTGPAATTLPDGAAAESLVES
SEVAVIGFFKDVESDSAKQFLQAAEAIDDIPFGITSNS
DVFSKYQLDKDGVVLFFKKFDEGRNNFEGEVTKENLL
DFIKHNQLPLVIEFTEQTAPKIFGGEIKTHILLFLPKSVS
DYDGKLSNFKTAAESFKGKILFIFIDSDHTDNQRILEFF
GLKKEECPAVRLITLEEEMTKYKPESEELTAERITEFC
HRFLEGKIKPHLMSQELPEDWDKQPVKVLVGKNFED
VAFDEKKNVFVEFYAPWCGHCKQLAPIWDKLGETYK
DHENIVIAKMDSTANEVEAVKVHSFPTLKFFPASADRT
VIDYNGERTLDGFKKFLESQGGQDGAGDDDDLEDLEE
AEEPDMEEEDDDQKAVKDEL

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.

Product Specification	
Synonyms	Cellular Thyroid Hormone-binding Protein, Prolyl 4-hydroxylase Subunit beta, p55
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 56.6 kDa, a single non-glycosylated polypeptide chain containing 502 amino acids. (MRGSGSHHHHHH-PDI).
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Thiol proteinReductase activity	Thiol Protein Reductase Activity is 0.001 Δ650nm/min-2, determined by measuring the turbidity increase at 650 nm due to insulin reduction. The activity is expressed as the ratio of the slope of a linear part of the turbidity curve to the lag time.
Isomerase activity	Isomerase Activity is 0.5 μmol active RNase A min-1 μmol PDI-1, according to the re-activation of reduced and denatured RNase A.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.0.
Endotoxin	Less than 1 EU/μg of rHuPDI as determined by LAL method.