

Protein Disulfide Isomerase A3 (PDIA3), Human Recombinant

CATALOG #:	7601-100	100 µg
	7601-1000	1 mg
	7601-5000	5 mg

SOURCE: *E. coli* (aa 25-505)

PURITY: >95% by SDS-PAGE

FORM: Lyophilized powder

RECONSTITUTION:

Centrifuge the vial prior to opening. Reconstitute in 50 mM Tris Buffer, pH 8.0 to a concentration of 0.1-1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 4°C for 1 week or -20°C for future use.

STORAGE CONDITIONS:

The lyophilized protein is best-stored desiccated below 0°C. Reconstituted PDI should be stored in working aliquots at -20°C. For long-term storage, it is recommended to add carrier protein (0.1% HAS or BSA).

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). Human Protein Disulfide Isomerase is involved in disulphide-bond formation and isomerization, as well as the reduction of disulphide bonds in proteins. PDI has been found to have moderate effects (25-fold) on the rate of oxidative folding of proteins in vitro. Recombinant Human PDI produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 508 amino acids and having a molecular mass of 57.1 kDa. The human PDI contains N-terminal 6xHis-tag and is purified by proprietary chromatographic techniques.

BIOLOGICAL ACTIVITY:

Recombinant PDI is biological active. Reductase activity is $1.0 \times 10^{-3} \Delta 650\text{nm}/\text{min}^{-2}$, 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 is 0.5 µmol active RNase A min⁻¹ µmol PDI-1, according to the re-activation of reduced and denatured RNase A.

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