

User Manual

Version 2.0

Product name: PDI1 (yeast)

Cat #: PDI-100, PDI-200, PDI-300, PDI-400, PDI-OEM

Description:

Recombinant yeast Protein Disulfide Isomerase is produced in *E. coli* as a single, non-glycosylated, polypeptide chain, containing 503 amino acids and having a molecular mass of 62.4 kDa. The PDI is fused to a 12 amino acid His-tag (515 a.a. total) at N-terminal and purified by proprietary chromatographic techniques. Recombinant Yeast Protein Disulfide Isomerase is involved in disulfide bond formation and isomerization, as well as the reduction of disulfide bonds in proteins. Recombinant PDI has been found to have moderate effects (25-fold) on the rate of oxidative folding of proteins in vitro.

Source: *Escherichia coli*

Recommended Storage Condition: -20°C

Physical Appearance:

Sterile filtered liquid form or lyophilized powder

Formulation:

The PDI protein (10mg/ml) solution was lyophilized from PBS pH 7.

Solubility:

It is recommended to reconstitute the lyophilized PDI in sterile 18MΩ-cm H₂O (no less than 100µg/ml), which can then be further diluted to other aqueous solutions.

Stability:

Lyophilized Protein Disulfide Isomerase, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Human PDI should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

Purity:

Greater than 99.0% as determined by RP-HPLC.

Reductase Activity:

0.001 650nm/ min-2. By measuring the turbidity increase at 650 nm due to insulin reduction (Holmgren, A. (1979) J. Biol. Chem. 254, 96279632). The activity is expressed as the ratio of the slope of a linear part of the turbidity curve to the lag time (Martínez-Galisteo, E., Padilla, C. A., Garcia-Alfonso, C., López-Barea, J., and

Barcena, J. A. (1993) Biochimie (Paris) 75, 803809).

Isomerase Activity:

0.5 μmol active RNase A min⁻¹ μmol PDI-1. According to the re-activation of reduced and denatured RNase A (Lyles, M. M. and Gilbert, H. F. (1991) Biochemistry 30, 613-619).