

Peroxiredoxin 2 Protein, Human, Recombinant (His)

General Information

Synonyms:	PRP;HEL-S-2a;TSA;NKEF-B;TDPX1;PTX1;TPX1;peroxiredoxin 2;PRX2;PRXII;NKEFB
Protein Construction:	A DNA sequence encoding the human PRDX2 (P32119) (Met 1-Asn 198) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P32119
Molecular Weight:	24 kDa (predicted); 27 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to reduce H ₂ O ₂ . The specific activity is >300 pmoles/min/μg.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Peroxiredoxin-2, also known as Natural killer cell-enhancing factor B, NKEF-B, Thiol-specific antioxidant protein, Thioredoxin peroxidase 1, Thioredoxin-dependent peroxide reductase 1, PRDX2 and NKEFB, is a cytoplasm protein that belongs to the ahpC / TSA family. Peroxiredoxin-2 / PRDX2 contains one thioredoxin domain. Peroxiredoxin-2 / PRDX2 is involved in redox regulation of the cell. It reduces peroxides with reducing equivalents provided through the thioredoxin system. Peroxiredoxin-2 / PRDX2 is not able to receive electrons from glutaredoxin. It may

play an important role in eliminating peroxides generated during metabolism. Peroxiredoxin-2 / PRDX2 might participate in the signaling cascades of growth factors and tumor necrosis factor-alpha by regulating the intracellular concentrations of H₂O₂. The Peroxiredoxins / Prx are a family of peroxidases that can reduce H₂O₂ using an electron from thioredoxin (Trx) or other substances. The mammalian Peroxiredoxins / Prx family is divided into six groups (PRDX1, PRDX2, PRDX3, PRDX4, PRDX5, PRDX6) on the basis of homology of amino acid sequences. They are located in the cytosol and play a role in the cell signaling system. All six mammalian peroxiredoxins are expressed in the lung. Peroxiredoxins / Prx is overexpressed in breast cancer tissues to a great extent suggesting that Peroxiredoxins / Prx has a proliferative effect and may be related to cancer development or progression.

Reference

- Cha M.-K., et al., 1995, Biochem. Biophys. Res. Commun. 217:900-7.
- Noh, D.Y. et al., 2001, Anticancer Res. 21 (3B): 2085-90.
- Chevallet M., et al., 2003, J. Biol. Chem. 278:37146-53.
- Schremmer, B. et al., 2007, Subcell Biochem. 44 :317-44.
- Gauci S., et al., 2009, Anal. Chem. 81:4493-501.

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