

Human Peroxiredoxin 2 / PRDX2 Protein (His Tag)

Catalog Number: 11255-H07B



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

HEL-S-2a; NKEF-B; NKEFB; PRP; PRX2; PRXII; PTX1; TDPX1; TPX1; TSA; AL022839; Band-8; NkefB; PRP; PrxII; Tdpx1; TDX1; Torin; TPx; TPx-B; TR; TSA

Protein Construction:

A DNA sequence encoding the human PRDX2 (P32119) (Met 1-Asn 198) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to reduce H₂O₂. The specific activity is >300 pmoles/min/μg.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human PRDX2 consists of 217 amino acids and predicts a molecular mass of 24 kDa. It migrates as an approximately 27 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

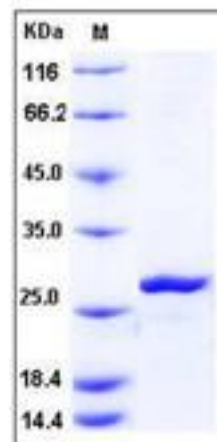
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 which 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.

References

1. Cha M.-K., et al., 1995, Biochem. Biophys. Res. Commun. 217:900-7.
2. Noh, D.Y. et al., 2001, Anticancer Res. 21 (3B): 2085-90.
3. Chevallet M., et al., 2003, J. Biol. Chem. 278:37146-53.

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