Data Sheet (Cat.No.TMPY-02208)

TargetMol

Peroxiredoxin 5 Protein, Human, Recombinant (His)

General Information

Synonyms:	B166;HEL-S-55;prx-V;ACR1;PMP20;AOEB166;SBBI10;PRXV;peroxiredoxin 5;PRDX6;PLP
Protein Construction:	A DNA sequence encoding the human PRDX5 (isoform cytoplasmic + peroxisomal) (P30044-2) (Met 53-Leu 214) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P30044-2
Molecular Weight:	18.5 kDa (predicted); 18.5 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, pH 7.5. 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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-5, also known as Alu corepressor 1, Antioxidant enzyme B166, Liver tissue 2D-page spot 71B, Peroxisomal antioxidant enzyme, Thioredoxin peroxidase PMP20, Thioredoxin reductase, PRDX5 and ACR1, is cytoplasm protein that belongs to the peroxiredoxin 2 family. Peroxiredoxin-5 / PRDX5 reduces hydrogen peroxide and alkyl hydroperoxides with reducing equivalents provided through the thioredoxin system. Peroxiredoxin-5 /

PRDX5 is involved in intracellular redox signaling. The Peroxiredoxins / Prx are a family of 25 kDa 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

Seo M.S., et al., 2000, J. Biol. Chem. 275: 20346-54.
Declercq J.-P., et al., 2001, J. Mol. Biol. 311:751-9.
Noh,D.Y. et al., 2001, Anticancer Res. 21 (3B): 2085-90.
Schremmer,B. et al., 2007, Subcell Biochem. 44 :317-44.