

Peroxiredoxin 5 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	peroxiredoxin 5;PrxV;AOPP;Pmp20;AOEB166;Prdx6
Protein Construction:	A DNA sequence encoding the mouse PRDX5 (mitochondrial) (P99029-1) (Met 49-Leu 210) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	P99029-1
Molecular Weight:	18.5 kDa (predicted); 18.5 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to reduce H ₂ O ₂ . The specific activity is > 100 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 PBS, 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. <small>Actual storage temperature shall be subject to the COA.</small>
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

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