

## PRDX5/Peroxiredoxin-5 Protein, Human (His)

Cat. No.:	HY-P73711
Synonyms:	Peroxiredoxin-5; PLP; Prx-V; Prdx5; AOEB166
Species:	Human
Source:	E. coli
Accession:	P30044-2 (M53-L214)
Gene ID:	25824
Molecular Weight:	Approximately 18.5 kDa

### PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 50 mM Tris, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	PRDX5, also known as Peroxiredoxin-5, serves as a thiol-specific peroxidase, facilitating the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively. This enzymatic activity is integral to the cellular defense against oxidative stress, functioning as a protective mechanism by detoxifying peroxides. Beyond its role in peroxide reduction, PRDX5 acts as a sensor for hydrogen peroxide-mediated signaling events, highlighting its involvement in cellular signaling pathways associated with oxidative stress responses. The multifaceted functions of PRDX5 underscore its significance in maintaining cellular homeostasis and orchestrating adaptive responses to oxidative challenges.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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