

Prohibitin Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Prohibitin 1;B-cell receptor-associated protein 32 (BAP 32);Phb;Phb1
Protein Construction:	174-272 aa
Species:	Mouse
Expression Host:	E. coli
Accession:	P67778
Molecular Weight:	16.2 kDa (predicted)
AA Sequence:	TFGKEFTEAVEAKQVAQQEAERARFVVEKAEQKKAAIISAEGDSKAAELIANSLATAGDGLIELRKLEAAEDI AYQLSRSRNITYLPAGQSVLLQLPQ

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

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:

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

Protein with pleiotropic attributes mediated in a cell-compartment- and tissue-specific manner, which include the plasma membrane-associated cell signaling functions, mitochondrial chaperone, and transcriptional co-regulator of transcription factors in the nucleus. Plays a role in adipose tissue and glucose Homeostasis in a sex-specific manner. Contributes to pulmonary vascular remodeling by accelerating proliferation of pulmonary arterial smooth muscle cells.; In the mitochondria, together with PHB2, forms large ring complexes (prohibitin complexes) in the inner mitochondrial membrane (IMM) and functions as chaperone protein that stabilizes mitochondrial respiratory

enzymes and maintains mitochondrial integrity in the IMM, which is required for mitochondrial morphogenesis, neuronal survival, and normal lifespan (Probable). The prohibitin complex, with DNAJC19, regulates cardiolipin remodeling and the protein turnover of OMA1 in a cardiolipin-binding manner. Regulates mitochondrial respiration activity playing a role in cellular aging. The prohibitin complex plays a role of mitophagy receptor involved in targeting mitochondria for autophagic degradation. Involved in mitochondrial-mediated antiviral innate immunity, activates DDX58/RIG-I-mediated signal transduction and production of IFNB1 and proinflammatory cytokine IL6.; In the nucleus, acts as a transcription coregulator, enhances promoter binding by TP53, a transcription factor it activates, but reduces the promoter binding by E2F1, a transcription factor it represses. Interacts with STAT3 to affect IL17 secretion in T-helper Th17 cells.; In the plasma membrane, cooperates with CD86 to mediate CD86-signaling in B lymphocytes that regulates the level of IgG1 produced through the activation of distal signaling intermediates. Upon CD40 engagement, required to activate NF-kappa-B signaling pathway via phospholipase C and protein kinase C activation.; (Microbial infection) In neuronal cells, cell surface-expressed PHB is involved in human enterovirus 71/EV-71 entry into neuronal cells specifically, while membrane-bound mitochondrial PHB associates with the virus replication complex and facilitates viral replication. May serve as a receptor for EV71.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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