Revision 1

Store at -20C

#2426

PHB1 Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	29	Rabbit	#P35232	5245

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

PHB1 Antibody detects endogenous levels of total PHB1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser252 of human PHB1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The prohibitins PHB1 and PHB2 are highly conserved, multifunctional proteins present in eukaryotic nuclear and mitochondrial compartments. PHB1 is a 30 kDa tumor suppressor protein involved in cell cycle control (1). PHB1 has been found in mitochondria, the nucleus, and the plasma membrane, as well as extracellularly in circulation (2). In mitochondria, prohibitins mainly exist as membrane-bound ring complexes and function as chaperones maintaining mitochondrial protein stability during protein synthesis and transportation (3,4). In the nucleus, prohibitins interact with transcription factors such as Rb and p53 to regulate target gene transcription (2,5). Extracellular prohibitin can bind and activate C3 to enhance complement activation (6).

Background References

1. McClung, J.K. et al. (1995) *Exp Gerontol* 30, 99-124.
2. Mishra, S. et al. (2006) *J. Cell. Mol. Med.* 10, 353-363.
3. Nijtmans, L.G. et al. (2000) *EMBO J.* 19, 2444-2451.
4. Tatsuta, T. et al. (2005) *Mol. Biol. Cell* 16, 248-259.
5. Fusaro, G. et al. (2003) *J. Biol. Chem.* 278, 47853-47861.
6. Mishra, S. et al. (2007) *Mol. Immunol.* 44, 1907-1912.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Limited Uses

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.