

PHB2 Antibody

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

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 33	Source/Isotype: Rabbit	UniProt ID: #Q99623	Entrez-Gene Id: 11331
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
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

PHB2 Antibody recognizes endogenous levels of total PHB2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu12 of human PHB2 protein. 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 (1). Prohibitin-2 (PHB2, REA) was originally identified as an estrogen receptor-specific coregulator. PHB2 directly interacts with hormone-bound estrogen receptor and represses its transcriptional activity through competitive inhibition of Src-1 coactivation of the estrogen receptor (2,3). Together with COUP transcription factors, PHB2 interacts with histone deacetylases HDAC1 and HDAC5 to mediate transcriptional regulation by the estrogen receptor through coupling the deacetylase to the transcription activation complex (4). Prohibitin PHB1/PHB2 heterodimers form large ring complexes on the mitochondrial membrane (5) and act as chaperones to stabilize mitochondrial proteins, such as OPA1 and Hax1, to support mitochondrial morphogenesis and protect against apoptosis (6-8).

Background References

- Mishra, S. et al. (2006) *J Cell Mol Med* 10, 353-63.
- Montano, M.M. et al. (1999) *Proc Natl Acad Sci U S A* 96, 6947-52.
- Delage-Mourroux, R. et al. (2000) *J Biol Chem* 275, 35848-56.
- Kurtev, V. et al. (2004) *J Biol Chem* 279, 24834-43.
- Tatsuta, T. et al. (2005) *Mol Biol Cell* 16, 248-59.
- Nijtmans, L.G. et al. (2000) *EMBO J* 19, 2444-51.
- Merkwirth, C. et al. (2008) *Genes Dev* 22, 476-88.
- Kasashima, K. et al. (2006) *J Biol Chem* 281, 36401-10.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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