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# PHB1 Antibody

Store at -20C  
#2426

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 29	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P35232	<b>Entrez-Gene Id:</b> 5245
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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

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

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

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

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