The prohibitins, called PHB1 and PHB2, are highly conserved proteins that are present in multiple compartments in eukaryotic cells. 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).

**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 References:**


**Applications**

- **W, IP**: Endogenous

**Species Cross-Reactivity**

- H, M, R, Mk

**Molecular Wt.**

- 32 kDa

**Source**

- Rabbit**

**Recommended Antibody Dilutions:**

- 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.

**Species Cross-Reactivity**

- **H**: human
- **M**: mouse
- **R**: rat
- **Hm**: hamster
- **Mk**: monkey
- **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
- **All**: all species expected

**Species enclosed in parentheses are predicted to react based on 100% homology.**

**Applications Key:**

- W—Western
- IP—Immunoprecipitation
- IHC—Immunohistochemistry
- ChIP—Chromatin Immunoprecipitation
- IF—Immunofluorescence
- F—Flow cytometry
- E-P—ELISA-Peptide

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

© 2010 Cell Signaling Technology, Inc.