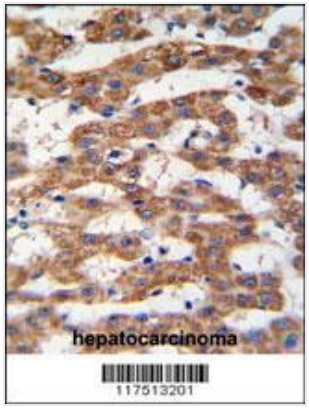
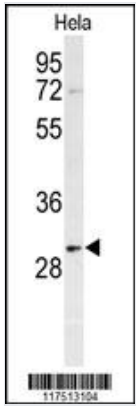
Prohibitin (PHB) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

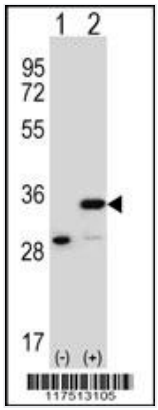
Product Name	Prohibitin (PHB), Polyclonal Antibody
Full Product Name	Prohibitin, ID (PHB) (Biotin)
Product Gene Name	anti-PHB antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Ammonium Sulfate Precipitation.
Specificity	Recognizes human PHB.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	31.9 kDa (292aa) confirmed by MALDI-TOF
OMIM	176705
3D Structure	ModBase 3D Structure for P35232
Immunogen	Synthetic peptide selected from the C-terminal region of human PHB (KLH).
Conjugate	Biotin
Note	Preservative Free
Product Categories/Family for anti-PHB antibody	Antibodies; Membrane Proteins
Applications Tested/Suitable for anti-PHB antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-PHB antibody	IHC: 1:10-1:50 ELISA: 1:1,000 WB: 1:50-1:100 Applications are based on unconjugated antibody.
Related Product Information for anti-PHB antibody	MBS6494569 is an antibody targeting PHB. Also known as Prohibitin, ID (PHB) (Biotin). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-PHB antibody	1. Gregory-Bass, R.C., Int. J. Cancer 122(9), 1923-1930 (2008). 2. Ross, J.A., J. Biol. Chem. 283(8), 4699-4713 (2008). 3. White, J.J., Genomics 11(1), 228-230 (1991).
Other Notes	Small volumes of anti-PHB antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



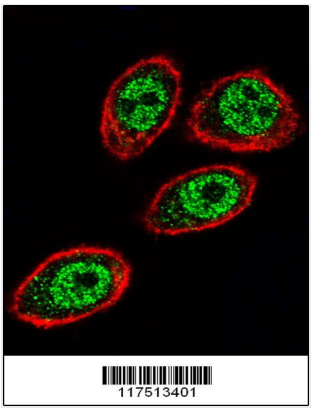
Immunohistochemistry (IHC) of anti-PHB antibody
Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PHB antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



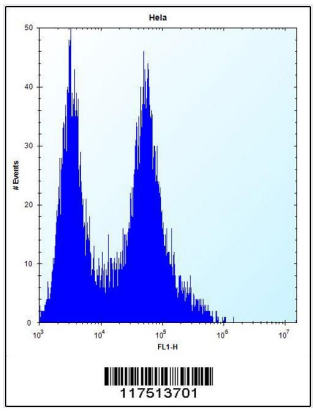
Western Blot (WB) of anti-PHB antibody
Western blot analysis of PHB Antibody (Center) in Hela cell line lysates (35ug/lane). PHB (arrow) was detected using the purified Pab.



Western Blot (WB) of anti-PHB antibody
Western blot analysis of PHB (arrow) using rabbit polyclonal PHB Antibody (Center). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PHB gene.



Immunofluorescence (IF) of anti-PHB antibody
Confocal immunofluorescent analysis of PHB Antibody (Center) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).



Immunofluorescence (IF) of anti-PHB antibody
Confocal immunofluorescent analysis of PHB Antibody (Center) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PHB. It may not necessarily be applicable to this product.

NCBI GI #	4505773
NCBI GeneID	5245

NCBI Accession #	NP_002625
UniProt Primary Accession #	P35232
UniProt Secondary Accession #	Q4VBQ0; B4DY47
UniProt Related Accession #	P35232
GenBank Nucleotide #	NM_002634.3
NCBI Official Full Name	prohibitin isoform 1
NCBI Official Synonym Full Names	prohibitin
NCBI Official Symbol	PHB
NCBI Official Synonym Symbols	PHB1; HEL-215; HEL-S-54e
UniProt Protein Name	Prohibitin
Protein Family	Prohibitin
UniProt Gene Name	PHB
UniProt Entry Name	PHB_HUMAN
NCBI Protein Information	prohibitin
NCBI Summary for PHB	This gene is evolutionarily conserved, and its product is proposed to play a role in human cellular senescence and tumor suppression. Antiproliferative activity is reported to be localized to the 3' UTR, which is proposed to function as a trans-acting regulatory RNA. Several pseudogenes of this gene have been identified. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]
UniProt Comments for PHB	PHB: a pleiotropic membrane protein that suppresses cell proliferation, apoptosis and senescence. It plays a role both in maintaining mitochondrial integrity and in cell cycle regulation. Expression increases approximately 3-fold upon entry into G1 phase compared with other phases of the cell cycle. It helps prevent ROS-induced senescence and its expression decreases heterogeneously during cellular aging. Helps maintain the angiogenic capacity of endothelial cells. Up-regulated during activation of primary human T cells via CD3/CD28 pathways. Present in multiple cellular compartments. Large assemblies of PHB and PHB2 localize in the inner membrane of mitochondria. Acts as a mitochondrial chaperone protein, regulates mitochondrial morphogenesis, and helps regulate the organization of mitochondrial DNA. Reported to target lipid rafts. In the nucleus, it has been reported to interact with various transcription factors, modulating their activity. A potential tumor suppressor that functions as a potent transcriptional corepressor for estrogen receptor alpha. It is downregulated by androgens, and represses androgen receptor activity. Co-localizes with Rb in the nucleus and recruits N-CoR and HDAC1 for transcriptional repression. In vivo promoter occupancy studies have suggested that the PHB gene is a direct target of c-Myc. May bind to and enhance the transcriptional activity of p53. Both Phb and Phb2 are present in the circulation and can be internalized by cultured cells. Overexpressed in endometrioid ovarian adenocarcinoma and papillary serous ovarian carcinoma. Mutated in sporadic breast cancer. Protein type: Transcription, coactivator/corepressor; Apoptosis; Oncoprotein; Mitochondrial; Chaperone; Nuclear receptor co-regulator; Motility/polarity/chemotaxis; Cell cycle regulation Chromosomal Location of Human Ortholog: 17q21 Cellular Component: nucleoplasm; membrane; mitochondrion; integral to plasma membrane; mitochondrial inner membrane; cytoplasm; nucleus Molecular Function: protein binding; enzyme binding; histone deacetylase binding Biological Process: transcription from RNA polymerase II promoter; osteoblast differentiation; regulation of apoptosis; negative regulation of cell proliferation; progesterone receptor signaling pathway; regulation of transcription, DNA-dependent; positive regulation of transcription, DNA-dependent; histone deacetylation; negative regulation of cell growth; negative regulation of transcription from RNA polymerase II promoter; signal transduction; negative regulation of transcription, DNA-dependent Disease: Breast Cancer

Research Articles on PHB	**1.** decrease of PCMT1 significantly increased the proportion of D-Asp residues in PHB1 and had significant and fatal impacts on morphology and functions of the mitochondria, such as ATP production and the mitochondrial fusion-fission system
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