PHB Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PHB, Polyclonal Antibody
Full Product Name	PHB (Phospho-Thr258) Polyclonal Conjugated Antibody
Product Gene Name	anti-PHB antibody
Product Synonym Names	PHB (Phospho-Thr258) Conjugated Antibody; Prohibitin; PHB1
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	The antibody detects endogenous level of PHB only when phosphorylated at threonine 258.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	17,018 Da
OMIM	176705
3D Structure	ModBase 3D Structure for P35232
Immunogen	Peptide sequence around phosphorylation site of threonine 258 (N-I-T (p)-Y-L) derived from Human PHB.
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-PHB antibody	Most Applications
Application Notes for anti-PHB antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-PHB antibody	Prohibitin inhibits DNA synthesis. It has a role in regulating proliferation. As yet it is unclear if the protein or the mRNA exhibits this effect. May play a role in regulating mitochondrial respiration activity and in aging.
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.
Searchable Terms for PHB purchase	MBS9437183 is an antibody targeting PHB. Also known as PHB (Phospho-Thr258) Polyclonal Conjugated Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

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

NCBI GI #	527498279
NCBI GeneID	5245
NCBI Accession #	NP_001268425.1
UniProt Primary Accession #	P35232
UniProt Secondary Accession #	Q4VBQ0; B4DY47
UniProt Related Accession #	P35232
GenBank Nucleotide #	NM_001281496.1
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; epididymis luminal protein 215; epididymis secretory sperm binding protein Li 54e
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.** The study suggest that the tumor suppressing action of prohibitin is probably associated with luteinizing hormone mediated protection role against ovarian epithelial carcinoma.
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