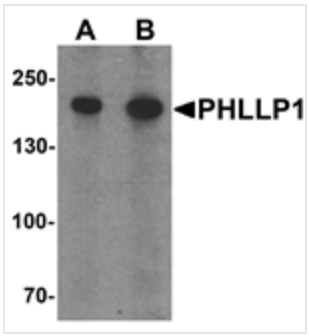
PHLPP1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PHLPP1, Polyclonal Antibody
Full Product Name	PHLPP1 Antibody
Product Gene Name	anti-PHLPP1 antibody
Product Synonym Names	PH domain and leucine rich repeat protein phosphatase 1, PHLPP, PLEKHE1, Suprachiasmatic nucleus circadian oscillatory protein, SCOP
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	PBS containing 0.02% sodium azide.
Purity/Purification	Affinity chromatography purified via peptide column
Specificity	At least four isoforms are known to exist; this antibody will only detect the largest isoform. PHLPP1 antibody is predicted to not cross react with PHLPP2.
Preparation and Storage	Store at 4 degree C for three months and -20 degree C, stable for up to one year.
Molecular Weight	133,565 Da
OMIM	609396
Immunogen Type	Peptide
Immunogen Description	PHLPP1 antibody was raised against an 18 amino acid peptide near the amino terminus of human PHLPP1.
Target Name	PHLPP1
Product Categories/Family for anti-PHLPP1 antibody	Total protein Ab
Applications Tested/Suitable for anti-PHLPP1 antibody	ELISA (EIA), Western Blot (WB)
Related Product Information for anti-PHLPP1 antibody	MBS9409318 is an antibody targeting PHLPP1. Also known as PHLPP1 Antibody. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-PHLPP1 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.



Western Blot (WB) of anti-PHLPP1 antibody
Western blot analysis of PHLPP1 in SW480 cell lysate with PHLPP1 antibody at (A) 1 and (B) 2 ug/ml.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PHLPP1. It may not necessarily be applicable to this product.

NCBI GI #	291219891
NCBI GeneID	23239
NCBI Accession #	NP_919431
UniProt Secondary Accession #	Q641Q7; Q6P4C4; Q6PJI6; Q86TN6; Q96FK2; Q9NUY1; A1A4F5
UniProt Related Accession #	O60346
GenBank Nucleotide #	NM_194449.3
NCBI Official Full Name	PH domain leucine-rich repeat-containing protein phosphatase 1
NCBI Official Synonym Full Names	PH domain and leucine rich repeat protein phosphatase 1
NCBI Official Symbol	PHLPP1
NCBI Official Synonym Symbols	SCOP; PHLPP; PLEKHE1
UniProt Protein Name	PH domain leucine-rich repeat-containing protein phosphatase 1
UniProt Synonym Protein Names	Pleckstrin homology domain-containing family E member 1; PH domain-containing family E member 1; Suprachiasmatic nucleus circadian oscillatory protein; hSCOP
Protein Family	PH domain leucine-rich repeat-containing protein phosphatase
UniProt Gene Name	PHLPP1
UniProt Synonym Gene Names	KIAA0606; PHLPP; PLEKHE1; SCOP; PH domain-containing family E member 1; hSCOP
UniProt Entry Name	PHLP1_HUMAN
NCBI Protein Information	PH domain leucine-rich repeat-containing protein phosphatase 1
NCBI Summary for PHLPP1	This gene encodes a member of the serine/threonine phosphatase family. The encoded protein promotes apoptosis by dephosphorylating and inactivating the serine/threonine kinase Akt, and functions as a tumor suppressor in multiple types of cancer. Increased expression of this gene may also play a role in obesity and type 2 diabetes by interfering with Akt-mediated insulin signaling. [provided by RefSeq, Dec 2011]

UniProt Comments for PHLPP1	PHLPP: a pleckstrin homology domain leucine-rich repeat protein phosphoserine and Â¿threonine phosphatase. A tumor suppressor that controls the onset and progression of various cancers because it controls the balance between cell survival and apoptosis. Catalyzes the dephosphorylation of the hydrophobic motif on the AGC kinases Akt, PKC, and S6 kinase, and the inhibitory site on the kinase Mst1. The dephosphorylation of PKCA and PKCB is destabilizing, leading to its degradation. The dephosphorylation of p70S6K at T390 reduces its activity, thus reducing the efficiency of protein translation. Dephosphorylation of Mst1 by PHLPP of an autoinhibitory site (T387) activates Mst1, resulting in the activation of the pro-apoptotic MAPK pathway. Ubiquitously expressed in non-cancerous tissues. Insensitive to inhibition by okadaic acid. PHLPP loss occurs at high frequency in colorectal cancer, and leads to the development of prostate tumors in mice. PHLPP degradation by the 26 S proteasome is controlled by a beta-TrCP-containing SkpÂ¿Cullin 1Â¿F-box protein (SCF) complex E3 ubiquitin ligase in a phosphorylation-dependent manner. This degradation requires phosphorylation of PHLPP1 by CK I and GSK-3beta. Activation of the PI3K/Akt pathway suppresses the degradation of PHLPP1 by inhibiting GSK-3beta activity. PHLPP2 activity is highly sensitive to a common polymorphism (L-1016-S) that reduces its rate of dephosphorylation of the hydrophobic motif of Akt and PKC, rendering it ineffective at inducing apoptosis. This variant is expressed by 30% of the human population. Interacts with the nucleotide free form of KRas via its LRR repeats. Interacts with AKT2, AKT3 and PKCB isoform beta-II. Protein type: Tumor suppressor; EC 3.1.3.16; Protein phosphatase, Ser/Thr (non-receptor) Chromosomal Location of Human Ortholog: 18q21.33 Cellular Component: membrane; cytosol; nucleus Molecular Function: protein binding; metal ion binding; phosphoprotein phosphatase activity Biological Process: epidermal growth factor receptor signaling pathway; fibroblast growth factor receptor signaling pathway; phosphoinositide-mediated signaling; nerve growth factor receptor signaling pathway; dephosphorylation; apoptosis; innate immune response; entrainment of circadian clock
Research Articles on PHLPP1	**1.** Suppression of PHLPP1 by DNA methylation contributes to melanoma development and progression.
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