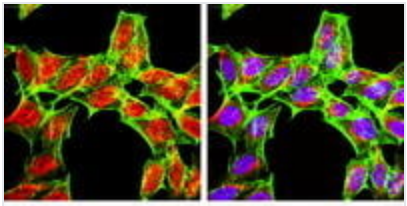
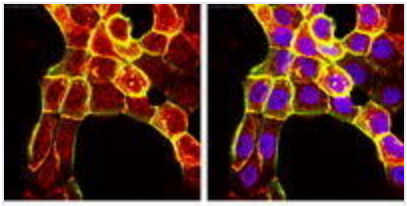
PHLPP Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

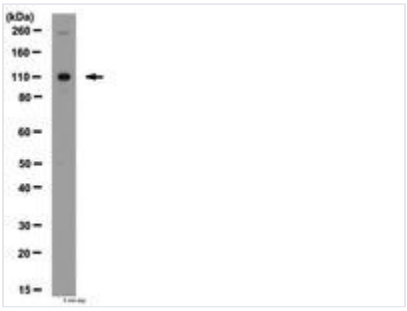
Product Name	PHLPP, Polyclonal Antibody
Full Product Name	PHLPP (PH Domain and Leucine-rich Repeat Protein Phosphatase, PH Domain Leucine-rich Repeat Protein Phosphatase, PH Domain Leucine-rich Repeat-containing Protein Phosphatase, PHLPP1, KIAA0606 Protein, Pleckstrin Homology Domain-containing Family E Protein
Product Gene Name	anti-PHLPP antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human PHLPP1. Species Crossreactivity: mouse, rat.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	189 kDa
OMIM	609396
3D Structure	ModBase 3D Structure for O60346
Immunogen	Linear peptide corresponding to the C-terminus of PHLPP1 (KLH).
Conjugate	MaxLight405
Positive Control	Human brain tissue lysate
Note	Preservative Free
Product Categories/Family for anti-PHLPP antibody	Antibodies; Tumor Suppressors
Applications Tested/Suitable for anti-PHLPP antibody	Western Blot (WB), Immunocytochemistry (ICC)
Application Notes for anti-PHLPP antibody	WB: 1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-PHLPP antibody	MBS6492906 is an antibody targeting PHLPP. Also known as PHLPP (PH Domain and Leucine-rich Repeat Protein Phosphatase, PH Domain Leucine-rich Repeat Protein Phosphatase, PH Domain Leucine-rich Repeat-containing Protein Phosphatase, PHLPP1, KIAA0606 Protein, Pleckstrin Homology Domain-containing Family E Protein. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-PHLPP 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.



Immunocytochemistry (ICC) of anti-PHLPP antibody
Confocal Immunocytochemistry Analysis: Hela cells were fixed, permeabilized, and stained with anti-PHLPP1 (Cy3, red), DAPI (blue, nuclei), and Phalloidin-AlexaFluor488 (actin, green).



Immunocytochemistry (ICC) of anti-PHLPP antibody
Confocal Immunocytochemistry Analysis A431 cells were fixed, permeabilized, and stained with anti-PHLPP1 (Cy3, red), DAPI (blue, nuclei), and Phalloidin-AlexaFluor488 (actin, green).



Western Blot (WB) of anti-PHLPP antibody
Western Blot Analysis: Representative lot data. Human Brain lysate was resolved by electrophoresis, transferred to PVDF and probed with anti-PHLPP1. Proteins were visualized using a donkey anti-rabbit secondary antibody conjugated to HRP and a chemiluminescence detection system. Arrow indicates PHLPP1 (observed ~110kD)

ADDITIONAL DETAILS

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

NCBI GI #	291219891
NCBI GeneID	23239
NCBI Accession #	NP_919431
UniProt Primary Accession #	O60346
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	Protein phosphatase PHLPP-like protein
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; SCN circadian oscillatory protein; PH domain-containing family E member 1; suprachiasmatic nucleus circadian oscillatory protein; pleckstrin homology domain containing, family E (with leucine
NCBI Summary for PHLPP	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 PHLPP	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; phosphoinositide-mediated signaling; fibroblast growth factor receptor signaling pathway; nerve growth factor receptor signaling pathway; dephosphorylation; apoptosis; innate immune response; entrainment of circadian clock
Research Articles on PHLPP	**1.** Suppression of PHLPP1 by DNA methylation contributes to melanoma development and progression.
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