10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# PHLPP1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7842a

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | O60346 |
| **Other Accession** | Q9WTR8, Q8CHE4 |
| **Reactivity** | Human |
| **Predicted** | Mouse, Rat, Bovine, Canine, Rabbit, Chicken |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB14892 |
| **Calculated MW** | 184672 |
| **Antigen Region** | 531-560 |

## Additional Information

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| **Gene ID** | 23239 |
| **Other Names** | PH domain leucine-rich repeat-containing protein phosphatase 1, Pleckstrin homology domain-containing family E member 1, PH domain-containing family E member 1, Suprachiasmatic nucleus circadian oscillatory protein, hSCOP, PHLPP1, KIAA0606, PHLPP, PLEKHE1, SCOP |
| **Target/Specificity** | This PHLPP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 531-560 amino acids from the N-terminal region of human PHLPP1. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | PHLPP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | PHLPP1 ( HGNC:20610) |

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| **Function** | Protein phosphatase involved in regulation of Akt and PKC signaling. Mediates dephosphorylation in the C-terminal domain hydrophobic motif of members of the AGC Ser/Thr protein kinase family; specifically acts on 'Ser-473' of AKT2 and AKT3, 'Ser-660' of PRKCB and 'Ser-657' of PRKCA (PubMed:15808505, PubMed:17386267, PubMed:18162466). Isoform 2 seems to have a major role in regulating Akt signaling in hippocampal neurons (By similarity). Akt regulates the balance between cell survival and apoptosis through a cascade that primarily alters the function of transcription factors that regulate pro- and antiapoptotic genes. Dephosphorylation of 'Ser-473' of Akt triggers apoptosis and suppression of tumor growth. Dephosphorylation of PRKCA and PRKCB leads to their destabilization and degradation (PubMed:18162466). Dephosphorylates STK4 on 'Thr-387' leading to STK4 activation and apoptosis (PubMed:20513427). Dephosphorylates RPS6KB1 and is involved in regulation of cap-dependent translation (PubMed:21986499). Inhibits cancer cell proliferation and may act as a tumor suppressor (PubMed:19079341). Dephosphorylates RAF1 inhibiting its kinase activity (PubMed:24530606). May act as a negative regulator of K-Ras signaling in membrane rafts (By similarity). Involved in the hippocampus- dependent long-term memory formation (By similarity). Involved in circadian control by regulating the consolidation of circadian periodicity after resetting (By similarity). Involved in development and function of regulatory T-cells (By similarity). |
| **Cellular Location** | Cytoplasm. Membrane; Peripheral membrane protein. Nucleus. Note=In colorectal cancer tissue, expression is concentrated at the lateral membrane of epithelial cells |
| **Tissue Location** | In colorectal cancer tissue, expression is highest in the surface epithelium of normal colonic mucosa adjacent to the cancer tissue but is largely excluded from the crypt bases. Expression is lost or significantly decreased in 78% of tested tumors (at protein level). Ubiquitously expressed in non-cancerous tissues |

## Background

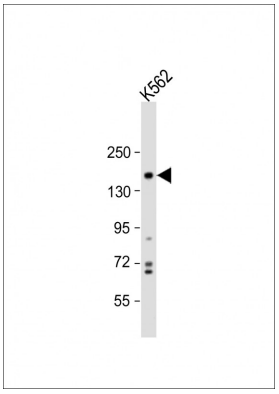
PHLPP1 is a protein phosphatase that specifically mediates dephosphorylation of 'Ser-473' of AKT1, a protein that regulates the balance between cell survival and apoptosis through a cascade that primarily alters the function of transcription factors that regulate pro- and antiapoptotic genes.

## References

Gao,T., J. Biol. Chem. 283 (10), 6300-6311 (2008)
Brognard,J., Mol. Cell 25 (6), 917-931 (2007)
Gao,T., Mol. Cell 18 (1), 13-24 (2005)

## Images

Anti-PHLPP1 Antibody (N-term) at 1:1000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 185 kDa Blocking/Dilution buffer: 5% NFDM/TBST.




Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.