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PHLPP2 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP7799b

Specification

PHLPP2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q6ZVD8

PHLPP2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 23035

Other Names
PH domain leucine-rich repeat-containing protein phosphatase 2, PH domain leucine-rich repeat-containing protein phosphatase-like, PHLPP-like, PHLPP2, KIAA0931, PHLPPL

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PHLPP2 Antibody (C-term) Blocking Peptide - Protein Information

Name PHLPP2

Synonyms KIAA0931, PHLPPL

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 AKT1, 'Ser-660' of PRKCB isoform beta-II and 'Ser-657' of PRKCA. 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 decreases cell proliferation. Also controls the phosphorylation of AKT3. 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. Dephosphorylation of PRKCA and PRKCB leads to their destabilization and degradation. Dephosphorylates RAF1 inhibiting its kinase activity (PubMed:24530606).

Cellular Location
Cytoplasm. Membrane; Peripheral membrane protein. Nucleus. Note=In colorectal cancer tissue, expression is concentrated in the cytoplasm and nucleus

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 80% of tested tumors (at protein level).

PHLPP2 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PHLPP2 Antibody (C-term) Blocking Peptide - Images

PHLPP2 Antibody (C-term) Blocking Peptide - Background

PHLPP2 is a protein phosphatase that specifically mediates dephosphorylation of 'Ser-473' of AKT1. This protein 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 AKT1 triggers apoptosis and decrease cell proliferation. It also controls the phosphorylation of AKT3.

PHLPP2 Antibody (C-term) Blocking Peptide - References

Brognard,J., Mol. Cell 25 (6), 917-931 (2007)