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PHLPP2 / PHLPPL Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS15655

Specification

PHLPP2 / PHLPPL Antibody (C-Terminus) - Product Information

Application	**IHC, ICC, IF, WB**
Primary Accession	Q6ZVD8
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**147kDa KDa**

PHLPP2 / PHLPPL Antibody (C-Terminus) - Additional Information

Gene ID 23035

Other Names
PH domain leucine-rich repeat-containing protein phosphatase 2, 3.1.3.16, PH domain leucine-rich repeat-containing protein phosphatase-like, PHLPP-like, PHLPP2, KIAA0931, PHLPPL

Target/Specificity
Human PHLPP2. At least three isoforms are known to exist; this antibody will detect the two largest isoforms. PHLPP2 antibody is predicted to not cross react with PHLPP1.

Reconstitution & Storage
Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions
PHLPP2 / PHLPPL Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

PHLPP2 / PHLPPL Antibody (C-Terminus) - 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

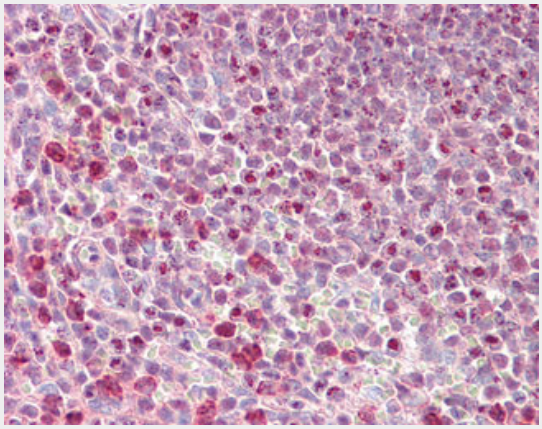
Tissue Location
In colorectal cancer tissue, expression is highest in the surface epithelium of normal colonic mucosa adjacent to the cancer tissue but is largely excluded from the crypt bases. Expression is lost or significantly decreased in 80% of tested tumors (at protein level).

PHLPP2 / PHLPPL Antibody (C-Terminus) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PHLPP2 / PHLPPL Antibody (C-Terminus) - Images



Anti-PHLPP2 / PHLPPL antibody IHC staining of human spleen.

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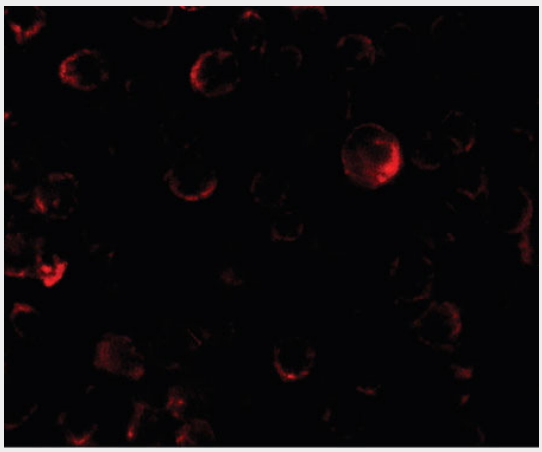
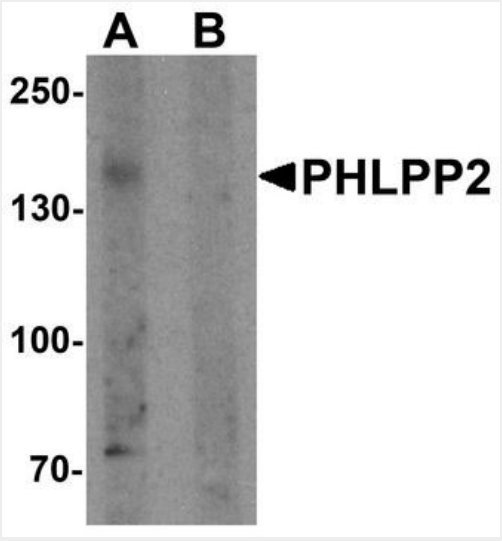
Immunocytochemistry of PHLPP2 in SW480 cells with PHLPP2 antibody at 2.5 ug/ml.



Immunofluorescence of PHLPP2 in SW480 cells with PHLPP2 antibody at 5 ug/ml.



Western blot analysis of PHLPP2 in SW480 cell lysate with PHLPP2 antibody at 1 ug/ml in (A) the...

PHLPP2 / PHLPPL Antibody (C-Terminus) - Background

Protein phosphatase that mediates dephosphorylation of 'Ser-473' of AKT1, 'Ser-660' of PRKCB isoform beta-II and 'Ser- 657' of PRKCA. AKT1 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 decreases cell proliferation. Also controls the phosphorylation of AKT3. Dephosphorylation of PRKCA and PRKCB leads to their destabilization and degradation. Inhibits cancer cell proliferation and may act as a tumor suppressor.

PHLPP2 / PHLPPL Antibody (C-Terminus) - References

Nagase T.,et al.DNA Res. 6:63-70(1999).
Ohara O.,et al.Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Martin J.,et al.Nature 432:988-994(2004).
Ota T.,et al.Nat. Genet. 36:40-45(2004).