

Product Information



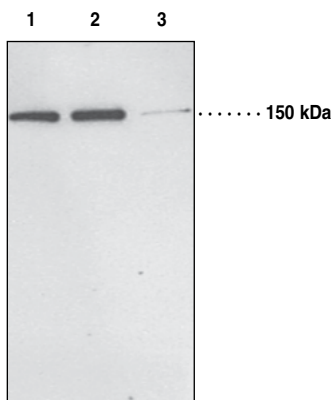
PH Domain Leucine-rich Repeat Protein Phosphatase 1 Polyclonal Antibody

Item No. 10007191 • Lot No. XXXXXX

- Synonyms:** KIAA0606 Protein, PHLPP1, PLEKHE1 Protein, SCOP, Suprachiasmatic Nucleus Circadian Oscillatory Protein
- Supplied as:** This vial contains *lot specific* µg of peptide affinity-purified IgG in *lot specific* µl TBS, pH 7.4, containing 50% glycerol, 0.1% BSA, and 0.02% sodium azide
- Host:** Rabbit
- Antigen:** Synthetic peptide from human PHLPP1 (amino acids 1192-1205 of the α isoform, or amino acids 1704-1717 of the β isoform); homology of the peptide antigen with PHLPP1 from other known species:
Human YQLDQLPDYYDTPL
Mouse and Rat f QmD h LPD c YDTP L
- Cross-reactivity:** (+) Human, mouse, and rat PHLPP1α and PHLPP1β, (-) PHLPP2; other species not tested
- Stability:** ≥1 year at 4°C
- Applications:** The recommended starting dilution for western blot is *lot specific* µg/ml (*lot specific:lot specific*), *lot specific* µg/ml (*lot specific:lot specific*) for immunohistochemistry (paraffin-embedded sections), and *lot specific* µg/ml (*lot specific:lot specific*) for immunocytochemistry. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Cayman's PHLPP1 Polyclonal Antibody detects the carboxy-terminal amino acids within the PDZ-binding domain of both the PHLPP1 α and β isoforms. PHLPP2 shares partial identity with the domains of PHLPP1 however it has a unique PDZ-binding domain sequence. Protein kinase B/Akt is critical in regulating cell growth and death. Activation of a serine residue (Ser⁴⁷³) in a C-terminal hydrophobic motif of Akt is known to be linked to some of the most common human cancers. PHLPP1 and PHLPP2 dephosphorylate the hydrophobic motif of Akt and thus reduce Akt activity, resulting in a increase in the number of apoptotic cells.¹ PHLPP1 levels are markedly reduced in several colon cancer and glioblastoma cell lines that have elevated Akt phosphorylation. Injection of a human glioblastoma cell line overexpressing PHLPP1 into mice reduced tumor size by nearly 70% compared with control animals. mRNA of PHLPP1 is ubiquitously expressed, with highest levels found in brain.¹

Cayman's PHLPP polyclonal antibody detects the enzyme at around 150 kDa (α isoform) and 200 kDa (β isoform) by western blot from various cell lines (THP-1) and tissues such as brain.



Lane 1: Mouse brain homogenate (40 µg)
Lane 2: Mouse brain homogenate (60 µg)
Lane 3: Human hippocampus supernatant (60 µg)

Laboratory Procedures

Immunofluorescent staining of cultured cells

1. Grow cells in 6 or 24 well plates until confluent.
2. Wash cells briefly with TBS, pH 7.4
3. Fix the cells with 1% formaldehyde in TBS, pH 7.4, for 10 minutes.
4. Wash the cells 3 times with TBS, containing 1% Triton-X 100 (TBST), 10 minutes each.
5. Incubate the cells with 10% normal serum (from the same species in which the secondary antibody is raised) in TBST, for 30 minutes.
6. Incubate the cells with 10 µg/ml PHLPP polyclonal antibody (recommended starting dilution 1:50; optimal dilution to be determined by end user) for 1 hour.
7. Wash the cells 3 times in TBST, 10 minutes each.
8. Incubate the cells in the dark for 1 hour with a fluorochrome-conjugated secondary antibody at a concentration recommended by the provider.
9. Wash cells 3 times in TBST, 10 minutes each.
10. Examine the staining under a fluorescent microscope with appropriate filter. Store the plate at 4°C in the dark for later analysis.

Reference

1. Gao, T., Furnari, F, and Newton, A.C. *Molecular Cell* **18**, 13-24 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10007191

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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