

PAFAH1B1 / LIS1 Antibody Goat Polyclonal Antibody Catalog # ALS12624

## **Specification**

## PAFAH1B1 / LIS1 Antibody - Product Information

Application Primary Accession Reactivity

Host Clonality Calculated MW Dilution WB, IHC-P, E <u>P43034</u> Human, Mouse, Rat, Rabbit, Zebrafish, Hamster, Monkey, Pig, Chicken, Horse, Xenopus, Bovine, Dog Goat Polyclonal 47kDa KDa WB~~1:1000 IHC-P~~N/A E~~N/A

## PAFAH1B1 / LIS1 Antibody - Additional Information

Gene ID 5048

Other Names Platelet-activating factor acetylhydrolase IB subunit alpha {ECO:0000255|HAMAP-Rule:MF\_03141}, Lissencephaly-1 protein {ECO:0000255|HAMAP-Rule:MF\_03141}, LIS-1 {ECO:0000255|HAMAP-Rule:MF\_03141}, PAF acetylhydrolase 45 kDa subunit {ECO:0000255|HAMAP-Rule:MF\_03141}, PAF-AH 45 kDa subunit {ECO:0000255|HAMAP-Rule:MF\_03141}, PAF-AH alpha {ECO:0000255|HAMAP-Rule:MF\_03141}, PAFAH alpha {ECO:0000255|HAMAP-Rule:MF\_03141}, PAF-AH alpha {ECO:0000255|HAMAP-Rule:MF\_03141},

Target/Specificity Human PAFAH1B1 / LIS1.

**Reconstitution & Storage** Store at -20°C. Minimize freezing and thawing.

**Precautions** PAFAH1B1 / LIS1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## PAFAH1B1 / LIS1 Antibody - Protein Information

Name LIS1

Function

Regulatory subunit (beta subunit) of the cytosolic type I platelet-activating factor (PAF) acetylhydrolase (PAF-AH (I)), an enzyme that catalyzes the hydrolyze of the acetyl group at the



sn-2 position of PAF and its analogs and participates in PAF inactivation. Regulates the PAF-AH (I) activity in a catalytic dimer composition- dependent manner (By similarity). Required for proper activation of Rho GTPases and actin polymerization at the leading edge of locomoting cerebellar neurons and postmigratory hippocampal neurons in response to calcium influx triggered via NMDA receptors (By similarity). Positively regulates the activity of the minus-end directed microtubule motor protein dynein. May enhance dynein-mediated microtubule sliding by targeting dynein to the microtubule plus end. Required for several dynein- and microtubule-dependent processes such as the maintenance of Golgi integrity, the peripheral transport of microtubule fragments and the coupling of the nucleus and centrosome. Required during brain development for the proliferation of neuronal precursors and the migration of newly formed neurons from the ventricular/subventricular zone toward the cortical plate. Neuronal migration involves a process called nucleokinesis, whereby migrating cells extend an anterior process into which the nucleus subsequently translocates. During nucleokinesis dynein at the nuclear surface may translocate the nucleus towards the centrosome by exerting force on centrosomal microtubules. May also play a role in other forms of cell locomotion including the migration of fibroblasts during wound healing. Required for dynein recruitment to microtubule plus ends and BICD2-bound cargos (PubMed: <a href="http://www.uniprot.org/citations/22956769" target=" blank">22956769</a>). May modulate the Reelin pathway through interaction of the PAF-AH (I) catalytic dimer with VLDLR (By similarity).

#### **Cellular Location**

Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle {ECO:0000255|HAMAP-Rule:MF\_03141}. Nucleus membrane {ECO:0000255|HAMAP- Rule:MF\_03141}. Note=Redistributes to axons during neuronal development. Also localizes to the microtubules of the manchette in elongating spermatids and to the meiotic spindle in spermatocytes (By similarity). Localizes to the plus end of microtubules and to the centrosome. May localize to the nuclear membrane.

**Tissue Location** 

Fairly ubiquitous expression in both the frontal and occipital areas of the brain

#### PAFAH1B1 / LIS1 Antibody - Protocols

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

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

### PAFAH1B1 / LIS1 Antibody - Images



Anti-PAFAH1B1 / LIS1 antibody IHC of human pancreas.



Anti-PAFAH1B1 / LIS1 antibody IHC of human thyroid.



Anti-PAFAH1B1 / LIS1 antibody IHC of human brain, cortex.

# PAFAH1B1 / LIS1 Antibody - Background

Required for proper activation of Rho GTPases and actin polymerization at the leading edge of locomoting cerebellar neurons and postmigratory hippocampal neurons in response to calcium influx triggered via NMDA receptors. Non-catalytic subunit of an acetylhydrolase complex which inactivates platelet- activating factor (PAF) by removing the acetyl group at the SN-2 position (By similarity). Positively regulates the activity of the minus-end directed microtubule motor protein dynein. May enhance dynein-mediated microtubule sliding by targeting dynein to the microtubule plus end. Required for several dynein- and microtubule-dependent processes such as the maintenance of Golgi integrity, the peripheral transport of microtubule fragments and the coupling



of the nucleus and centrosome. Required during brain development for the proliferation of neuronal precursors and the migration of newly formed neurons from the ventricular/subventricular zone toward the cortical plate. Neuronal migration involves a process called nucleokinesis, whereby migrating cells extend an anterior process into which the nucleus subsequently translocates. During nucleokinesis dynein at the nuclear surface may translocate the nucleus towards the centrosome by exerting force on centrosomal microtubules. May also play a role in other forms of cell locomotion including the migration of fibroblasts during wound healing.

## PAFAH1B1 / LIS1 Antibody - References

Reiner O., et al. Nature 364:717-721(1993). Lo Nigro C., et al. Hum. Mol. Genet. 6:157-164(1997). Zhao M.J., et al. Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases. Feng Z., et al. Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases. Ota T., et al. Nat. Genet. 36:40-45(2004).