

Product datasheet

Anti-LIS1 antibody ab2607

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Overview

Product name	Anti-LIS1 antibody
Description	Rabbit polyclonal to LIS1
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Rabbit, Chicken, Guinea pig, Cow, Dog, Turkey, Pig, Xenopus laevis, Chimpanzee, Zebrafish, Rhesus monkey, Gorilla, Orangutan, Xenopus tropicalis 
Immunogen	Synthetic peptide corresponding to Human LIS1. Represents a portion of human Lissencephaly 1 (Lis 1) protein encoded in part by exons 3 and 4.
Positive control	WB: HeLa, Jurkat, K562, TCMK-1, C6 whole cell lysates
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 Preservative: 0.1% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
Purification notes	Affinity purified using the immunising peptide immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab2607 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/2500.

Target

Function

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.

Tissue specificity

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

Involvement in disease

Defects in PFAFH1B1 are the cause of lissencephaly type 1 (LIS1) [MIM:607432]; also known as classic lissencephaly. LIS1 is characterized by agyria or pachgyria and disorganization of the clear neuronal lamination of normal six-layered cortex. The cortex is abnormally thick and poorly organized with 4 primitive layers. LIS1 is associated with enlarged and dysmorphic ventricles and often hypoplasia of the corpus callosum.

Defects in PFAFH1B1 are the cause of subcortical band heterotopia (SBH) [MIM:607432]. SBH is a mild brain malformation of the lissencephaly spectrum. It is characterized by bilateral and symmetric ribbons of gray matter found in the central white matter between the cortex and the ventricular surface.

Defects in PFAFH1B1 are a cause of Miller-Dieker lissencephaly syndrome (MDLS) [MIM:247200]. MDLS is a contiguous gene deletion syndrome of chromosome 17p13.3, characterized by classical lissencephaly and distinct facial features. Additional congenital malformations can be part of the condition.

Sequence similarities

Belongs to the WD repeat LIS1/nudF family.

Contains 1 LisH domain.

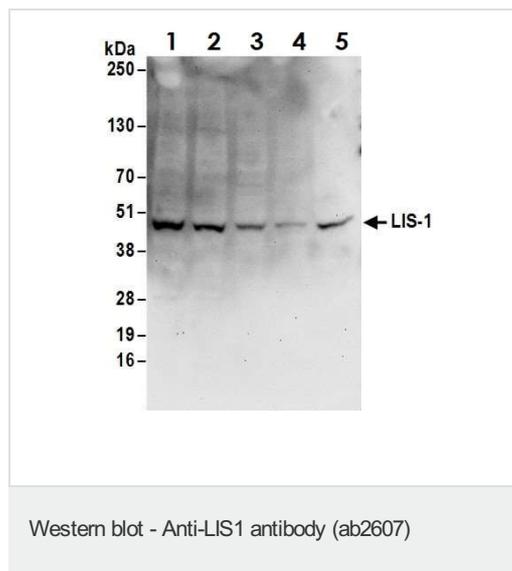
Contains 7 WD repeats.

Domain

Dimerization mediated by the LisH domain may be required to activate dynein.

Cellular localization

Cytoplasm > cytoskeleton. Cytoplasm > cytoskeleton > centrosome. Cytoplasm > cytoskeleton > spindle. Nucleus membrane. 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.



All lanes : Anti-LIS1 antibody (ab2607) at 1 µg/ml

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 3 : K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate

Lane 4 : TCMK-1 (mouse kidney epithelial cell line) whole cell lysate

Lane 5 : C6 (rat glioma cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

Exposure time: 30 seconds

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