SANTA CRUZ BIOTECHNOLOGY, INC.

LIS1 (H-7): sc-374586

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lissencephaly (smooth brain) is an abnormality of brain development characterized by incomplete neuronal migration and a smooth cerebral surface, resulting in severe mental retardation. Genetic analysis identified two proteins that are mutated in some cases of lissencephaly, designated lissencephaly-1 protein (LIS1) and doublecortin. LIS1 shows sequence homology to β-subunits of heterotrimeric G proteins. Doublecortin contains a consensus Abl phosphorylation site, and it has some sequence homology to a predicted kinase protein. Both proteins are highly expressed in developing brain, suggesting that they may be involved in a signal transduction pathway that is crucial to brain development.

CHROMOSOMAL LOCATION

Genetic locus: PAFAH1B1 (human) mapping to 17p13.3; Pafah1b1 (mouse) mapping to 11 B5.

SOURCE

LIS1 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-31 at the N-terminus of LIS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIS1 (H-7) is available conjugated to agarose (sc-374586 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374586 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374586 PE), fluorescein (sc-374586 FITC), Alexa Fluor® 488 (sc-374586 AF488), Alexa Fluor® 546 (sc-374586 AF546), Alexa Fluor® 594 (sc-374586 AF594) or Alexa Fluor® 647 (sc-374586 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374586 AF680) or Alexa Fluor® 790 (sc-374586 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374586 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

LIS1 (H-7) is recommended for detection of LIS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LIS1 (H-7) is also recommended for detection of LIS1 in additional species, including canine, bovine, porcine and avian.

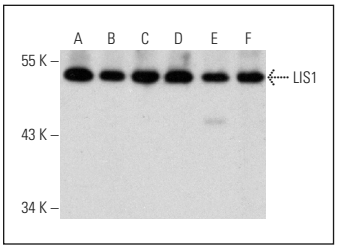
Suitable for use as control antibody for LIS1 siRNA (h): sc-35814, LIS1 siRNA (m): sc-35815, LIS1 shRNA Plasmid (h): sc-35814-SH, LIS1 shRNA Plasmid (m): sc-35815-SH, LIS1 shRNA (h) Lentiviral Particles: sc-35814-V and LIS1 shRNA (m) Lentiviral Particles: sc-35815-V.

Molecular Weight of LIS1: 47 kDa.

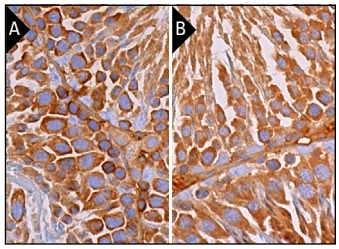
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



LIS1 (H-7): sc-374586. Western blot analysis of LIS1 expression in SH-SY5Y (**A**), HeLa (**B**), NIH/3T3 (**C**), BC_3H1 (**D**), C6 (**E**) and H19-7/IGF-IR (**F**) whole cell lysates.



LIS1 (H-7): sc-374586. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse (**A**) and rat (**B**) testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Hong, H., et al. 2019. Extraciliary roles of the ciliopathy protein JBTS17 in mitosis and neurogenesis. Ann. Neurol. 86: 99-115.
2. Kruse, K., et al. 2019. Analysis of biological networks in the endothelium with biomimetic microsystem platform. Am. J. Physiol. Lung Cell. Mol. Physiol. 317: L392-L401.
3. Na, W., et al. 2020. Aesculetin inhibits osteoclastic bone resorption through blocking ruffled border formation and lysosomal trafficking. Int. J. Mol. Sci. 21: 8581.
4. Mori, Y., et al. 2021. Cdc42 is required for male germline niche development in mice. Cell Rep. 36: 109550.
5. Wu, Y.O., et al. 2021. Overexpression of the microtubule-binding protein CLIP-170 induces a +TIP network superstructure consistent with a biomolecular condensate. PLoS ONE 16: e0260401.
6. Ishii, K., et al. 2022. Reelin regulates the migration of late-born hippocampal CA1 neurons via cofilin phosphorylation. Mol. Cell. Neurosci. 124: 103794.
7. Feng, Y., et al. 2022. Sertoli cell survival and barrier function are regulated by miR-181c/d-Pafah1b1 axis during mammalian spermatogenesis. Cell. Mol. Life Sci. 79: 498.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.