

LIS1 (H-300): sc-15319

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.

REFERENCES

1. Reiner, O., et al. 1993. Isolation of a Miller-Dieker lissencephaly gene containing G protein β subunit-like repeats. *Nature* 364: 717-721.
2. Garcia-Higuera, I., et al. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. *Biochemistry* 35: 13985-13994.

CHROMOSOMAL LOCATION

Genetic locus: PFAH1B1 (human) mapping to 17p13.3; Pafah1b1 (mouse) mapping to 11 B5.

SOURCE

LIS1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping near the N-terminus of LIS1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LIS1 (H-300) is recommended for detection of LIS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-300) 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.

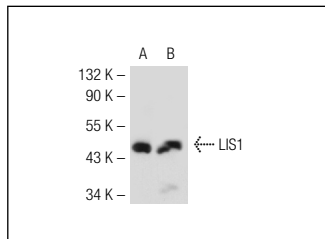
Molecular Weight of LIS1: 47 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, rat kidney extract: sc-2394 or Caki-1 cell lysate: sc-2224.

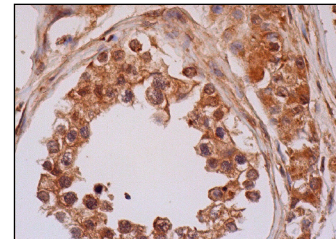
STORAGE

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

DATA



LIS1 (H-300): sc-15319. Western blot analysis of LIS1 expression in 293T (A) and Caki-1 (B) whole cell lysates.



LIS1 (H-300): sc-15319. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Miyata, H., et al. 2004. Lissencephaly with agenesis of corpus callosum and rudimentary dysplastic cerebellum: a subtype of lissencephaly with cerebellar hypoplasia. *Acta Neuropathol.* 107: 69-81.
2. Jiménez-Mateos, E.M., et al. 2005. Binding of microtubule-associated protein 1B to LIS1 affects the interaction between dynein and LIS1. *Biochem. J.* 389: 333-341.
3. Mesngon, M.T., et al. 2006. Regulation of cytoplasmic dynein ATPase by LIS1. *J. Neurosci.* 26: 2132-2139.
4. Messi, E., et al. 2008. Retinoic acid reduces human neuroblastoma cell migration and invasiveness: effects on DCX, LIS1, neurofilaments-68 and vimentin expression. *BMC Cancer* 8: 30.
5. Evangelisti, C., et al. 2009. MiR-128 up-regulation inhibits reelin and DCX expression and reduces neuroblastoma cell motility and invasiveness. *FASEB J.* 23: 4276-4287.

RESEARCH USE

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

PROTOCOLS

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

MONOS
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Try **LIS1 (H-7): sc-374586** or **LIS1 (C-7): sc-393320**, our highly recommended monoclonal alternatives to LIS1 (H-300).