

LIN-9 (Mab#1): sc-130571

BACKGROUND

LIN-9, also known as TGS, BARA or TGS1, is a 542 amino acid protein that localizes to the nucleoplasm and is a mammalian homolog of the *C. elegans* LIN-9 protein. Expressed in testis and thymus, LIN-9 functions as a component of the DREAM complex (also known as the LINC complex), which is comprised of several proteins, all of which work in concert to repress cell cycle-dependent genes. LIN-9 specifically acts as a tumor suppressor that associates with Rb and inhibits DNA synthesis, possibly also controlling the expression of genes that are required for the G₁/S cell cycle transition. Three isoforms of LIN-9 exist due to alternative splicing events. The gene encoding LIN-9 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Korenjak, M., et al. 2004. Native E2F/RbF complexes contain Myb-interacting proteins and repress transcription of developmentally controlled E2F target genes. *Cell* 119: 181-193.
2. Gargica, S., et al. 2004. Inhibition of oncogenic transformation by mammalian LIN-9, a pRb-associated protein. *EMBO J.* 23: 4627-4638.
3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609375. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: LIN9 (human) mapping to 1q42.12; Lin9 (mouse) mapping to 1 H4.

SOURCE

LIN-9 (Mab#1) is a mouse monoclonal antibody raised against full-length recombinant LIN-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LIN-9 (Mab#1) is recommended for detection of LIN-9 long form of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for LIN-9 siRNA (h): sc-88786, LIN-9 siRNA (m): sc-105615, LIN-9 shRNA Plasmid (h): sc-88786-SH, LIN-9 shRNA Plasmid (m): sc-105615-SH, LIN-9 shRNA (h) Lentiviral Particles: sc-88786-V and LIN-9 shRNA (m) Lentiviral Particles: sc-105615-V.

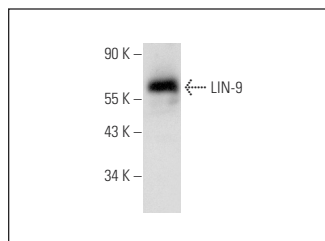
Molecular Weight of LIN-9 isoforms 1/2/3: 62/64/58 kDa.

Positive Controls: human testis extract: sc-363781.

STORAGE

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

DATA



LIN-9 (Mab#1): sc-130571. Western blot analysis of LIN-9 expression in human testis tissue extract.

SELECT PRODUCT CITATIONS

1. Flowers, S., et al. 2011. Tissue-specific gene targeting by the multiprotein mammalian DREAM complex. *J. Biol. Chem.* 286: 27867-27871.
2. Flowers, S., et al. 2013. Cooperative activation of tissue-specific genes by pRb and E2F1. *Cancer Res.* 73: 2150-2158.
3. Flowers, S., et al. 2014. p107-Dependent recruitment of SWI/SNF to the alkaline phosphatase promoter during osteoblast differentiation. *Bone* 69: 47-54.
4. Nath, S., et al. 2015. Deregulation of Rb-E2F1 axis causes chromosomal instability by engaging the transactivation function of Cdc20-anaphase-promoting complex/cyclosome. *Mol. Cell. Biol.* 35: 356-369.
5. Chen, H.M., et al. 2017. Ovarian cancer proliferation and apoptosis are regulated by human transfer RNA methyltransferase 9-like LIN9. *Oncol. Lett.* 14: 4461-4466.

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.