SANTA CRUZ BIOTECHNOLOGY, INC.

LIN-9 (C-10): sc-398234

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 G_1/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.

CHROMOSOMAL LOCATION

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

SOURCE

LIN-9 (C-10) is a mouse monoclonal antibody raised against amino acids 259-558 mapping at the C-terminus of LIN-9 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.

LIN-9 (C-10) is available conjugated to agarose (sc-398234 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398234 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398234 PE), fluorescein (sc-398234 FITC), Alexa Fluor® 488 (sc-398234 AF488), Alexa Fluor® 546 (sc-398234 AF546), Alexa Fluor® 594 (sc-398234 AF594) or Alexa Fluor® 647 (sc-398234 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398234 AF680) or Alexa Fluor® 790 (sc-398234 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

LIN-9 (C-10) is recommended for detection of LIN-9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

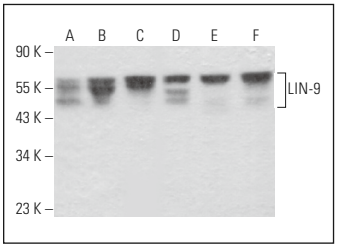
Molecular Weight of LIN-9 isoforms 1/2/3: 62/64/58 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HL-60 whole cell lysate: sc-2209 or human testis extract: sc-363781.

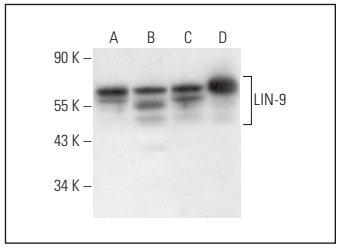
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: 24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LIN-9 (C-10): sc-398234. Western blot analysis of LIN-9 expression in NTERA-2 cl.D1 (**A**), K-562 (**B**), SJRH30 (**C**), F9 (**D**), A-10 (**E**) and KNRK (**F**) whole cell lysates.



LIN-9 (C-10): sc-398234. Western blot analysis of LIN-9 expression in NTERA-2 cl.D1 (**A**), HL-60 (**B**) and HeLa (**C**) whole cell lysates and human testis tissue extract (**D**).

SELECT PRODUCT CITATIONS

1. Periyasamy, M., et al. 2017. p53 controls expression of the DNA deaminase APOBEC3B to limit its potential mutagenic activity in cancer cells. Nucleic Acids Res. 45: 11056-11069.
2. Roelofs, P.A., et al. 2020. Characterization of the mechanism by which the RB/E2F pathway controls expression of the cancer genomic DNA deaminase APOBEC3B. Elife 9: e61287.
3. Kim, M.J., et al. 2021. PAF remodels the DREAM complex to bypass cell quiescence and promote lung tumorigenesis. Mol. Cell 81: 1698-1714.e6.
4. Liu, Q., et al. 2021. A MYBL2 complex for RRM2 transactivation and the synthetic effect of MYBL2 knockdown with WEE1 inhibition against colorectal cancer. Cell Death Dis. 12: 683.
5. Morales-Valencia, J., et al. 2023. Chromatin-associated SIN3B protects cancer cells from genotoxic stress-induced apoptosis and dictates DNA damage repair pathway choice. Mol. Cancer Res. 21: 947-957.

STORAGE

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

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.