SANTA CRUZ BIOTECHNOLOGY, INC.

Menin (B-9): sc-374371

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Menin (multiple endocrine neoplasia I, MEN1, MEAI, SCG2) is a nuclear tumor suppressor that is mutated in patients with multiple endocrine neoplasia type I (MEN1). Menin can activate the transcription of differentiation-regulating genes by covalent histone modification. In osteoblasts, the interaction of Menin and the TGFβ/Smad3 pathway negatively regulates BMP2/Smad1/5- and Runx2-dependent transcription activities leading to inhibition of late-stage differentiation. Menin regulates the expression of IGFBP-2 by influencing the IGFBP-2 promoter. Ectopic overexpression of Menin via adenoviruses induces apoptosis in murine embryonic fibroblasts in a Bax/Bak-dependent manner. Two mRNA exist and two variants of the shorter mRNA have alternative splicing that changes the CDS. Five variants where alternative splicing takes place in the 5' UTR have been identified.

CHROMOSOMAL LOCATION

Genetic locus: MEN1 (human) mapping to 11q13.1; Men1 (mouse) mapping to 19 A.

SOURCE

Menin (B-9) is a mouse monoclonal antibody raised against amino acids 1-300 of Menin 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.

Menin (B-9) is available conjugated to agarose (sc-374371 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374371 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374371 PE), fluorescein (sc-374371 FITC), Alexa Fluor® 488 (sc-374371 AF488), Alexa Fluor® 546 (sc-374371 AF546), Alexa Fluor® 594 (sc-374371 AF594) or Alexa Fluor® 647 (sc-374371 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374371 AF680) or Alexa Fluor® 790 (sc-374371 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Menin (B-9) is recommended for detection of Menin 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).

Suitable for use as control antibody for Menin siRNA (h): sc-35922, Menin siRNA (m): sc-35923, Menin shRNA Plasmid (h): sc-35922-SH, Menin shRNA Plasmid (m): sc-35923-SH, Menin shRNA (h) Lentiviral Particles: sc-35922-V and Menin shRNA (m) Lentiviral Particles: sc-35923-V.

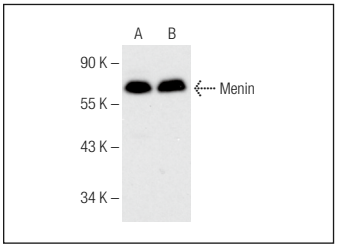
Molecular Weight of Menin: 67 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or A-431 nuclear extract: sc-2122.

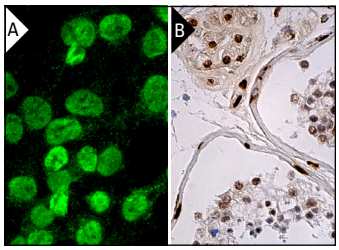
STORAGE

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

DATA



Menin (B-9): sc-374371. Western blot analysis of Menin expression in K-562 (**A**) and Jurkat (**B**) nuclear extracts.



Menin (B-9): sc-374371. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Hou, R., et al. 2017. MiR-762 can negatively regulate Menin in ovarian cancer. Onco Targets Ther. 10: 2127-2137.
2. Cinque, L., et al. 2017. MEN1 gene mutation with parathyroid carcinoma: first report of a familial case. Endocr. Connect. 6: 886-891.
3. Cinque, L., et al. 2017. Novel association of MEN1 gene mutations with parathyroid carcinoma. Oncol. Lett. 14: 23-30.
4. Getz, A.M., et al. 2017. Tumor suppressor Menin is required for subunit-specific nAChR α5 transcription and nAChR-dependent presynaptic facilitation in cultured mouse hippocampal neurons. Sci. Rep. 7: 1768.
5. Pan, Y., et al. 2018. MiR-24 may be a negative regulator of Menin in lung cancer. Oncol. Rep. 39: 2342-2350.
6. Batool, S., et al. 2021. Spatiotemporal patterns of Menin localization in developing murine brain: co-expression with the elements of cholinergic synaptic machinery. Cells 10: 1215.
7. Capodanno, Y., et al. 2021. Cross-talk among MEN1, p53 and Notch regulates the proliferation of pancreatic neuroendocrine tumor cells by modulating INSM1 expression and subcellular localization. Neoplasia 23: 979-992.
8. Carter, A.M., et al. 2021. Cdk5 drives formation of heterogeneous pancreatic neuroendocrine tumors. Oncogenesis 10: 83.
9. Duan, S., et al. 2023. Clinically defined mutations in MEN1 alter its tumor-suppressive function through increased Menin turnover. Cancer Res. Commun. 3: 1318-1334.
10. Paul, S., et al. 2024. Fyn-mediated phosphorylation of Menin disrupts telomere maintenance in stem cells. bioRxiv. E-published.

RESEARCH USE

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