SANTA CRUZ BIOTECHNOLOGY, INC.

SMCR7L (A-6): sc-514135

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SMCR7L (smith-magenis syndrome chromosome region, candidate 7-like) is a 463 amino acid single-pass membrane protein that is encoded by a gene which localizes to human chromosome 22 and may be associated with the pathogenesis of Smith-Magenis syndrome. Chromosome 22 houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

CHROMOSOMAL LOCATION

Genetic locus: MIEF1 (human) mapping to 22q13.1; Mief1 (mouse) mapping to 15 E1.

SOURCE

SMCR7L (A-6) is a mouse monoclonal antibody raised against amino acids 49-205 mapping near the N-terminus of SMCR7L of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SMCR7L (A-6) is available conjugated to agarose (sc-514135 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514135 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514135 PE), fluorescein (sc-514135 FITC), Alexa Fluor® 488 (sc-514135 AF488), Alexa Fluor® 546 (sc-514135 AF546), Alexa Fluor® 594 (sc-514135 AF594) or Alexa Fluor® 647 (sc-514135 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514135 AF680) or Alexa Fluor® 790 (sc-514135 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SMCR7L (A-6) is recommended for detection of SMCR7L 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 SMCR7L siRNA (h): sc-76518, SMCR7L siRNA (m): sc-153623, SMCR7L shRNA Plasmid (h): sc-76518-SH, SMCR7L shRNA Plasmid (m): sc-153623-SH, SMCR7L shRNA (h) Lentiviral Particles: sc-76518-V and SMCR7L shRNA (m) Lentiviral Particles: sc-153623-V.

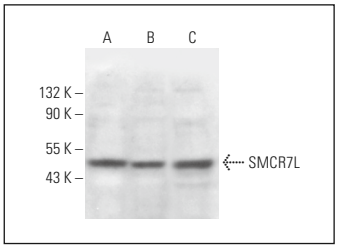
Molecular Weight of SMCR7L: 51 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MIA PaCa-2 cell lysate: sc-2285 or HT-1080 whole cell lysate: sc-364183.

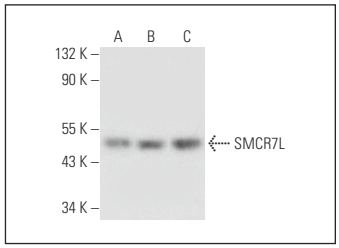
RECOMMENDED SUPPORT REAGENTS

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: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SMCR7L (A-6): sc-514135. Western blot analysis of SMCR7L expression in HL-60 (**A**), TF-1 (**B**) and NIH/3T3 (**C**) whole cell lysates.



SMCR7L (A-6): sc-514135. Western blot analysis of SMCR7L expression in HeLa (**A**), MIA PaCa-2 (**B**) and HT-1080 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Dey, S., et al. 2020. Roles of glycogen synthase kinase 3 α and calcineurin in regulating the ability of sperm to fertilize eggs. FASEB J. 34: 1247-1269.
2. Hsu, C.C., et al. 2021. Inositol serves as a natural inhibitor of mitochondrial fission by directly targeting AMPK. Mol. Cell 81: 3803-3819.e7.
3. Zerihun, M. and Qvit, N. 2023. Selective inhibitors targeting Fis1/Mid51 protein-protein interactions protect against hypoxia-induced damage in cardiomyocytes. Front. Pharmacol. 14: 1275370.
4. Al Rawi, S., et al. 2024. Study of an FBXO7 patient mutation reveals Fbxo7 and PI31 co-regulate proteasomes and mitochondria. FEBS J. 291: 2565-2589.

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.