SANTA CRUZ BIOTECHNOLOGY, INC.

SCNM1 (A-6): sc-376328

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. SCNM1 (sodium channel modifier 1) is a 230 amino acid protein that contains one matrin-type zinc finger. Localized to the nucleus, SCNM1 is thought to function as an RNA splicing factor that may modify the expression of sodium channel-related proteins. SCNM1 exists as two alternatively spliced isoforms that are encoded by a gene which maps to chromosome 1. Chromosome 1 is the largest human chromosome, spanning about 260 million base pairs and making up 8% of the human genome. Several disorders, including Stickler syndrome, Parkinsons disease, Gaucher disease, malignant melanoma and Usher syndrome, are caused by defects in genes that localize to chromosome 1.

REFERENCES

1. Sprunger, L.K., et al. 1999. Dystonia associated with mutation of the neuronal sodium channel Scn8a and identification of the modifier locus SCNM1 on mouse chromosome 3. Hum. Mol. Genet. 8: 471-479.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608095. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Buchner, D.A., et al. 2003. High-resolution mapping of the sodium channel modifier SCNM1 on mouse chromosome 3 and identification of a 1.3-kb recombination hot spot. Genomics 82: 452-459.
4. Buchner, D.A., et al. 2003. SCNM1, a putative RNA splicing factor that modifies disease severity in mice. Science 301: 967-969.
5. Howell, V.M., et al. 2007. Evidence for a direct role of the disease modifier SCNM1 in splicing. Hum. Mol. Genet. 16: 2506-2516.

CHROMOSOMAL LOCATION

Genetic locus: SCNM1 (human) mapping to 1q21.3; Scnm1 (mouse) mapping to 3 F2.1.

SOURCE

SCNM1 (A-6) is a mouse monoclonal antibody raised against amino acids 1-230 representing full length SCNM2 of human origin.

PRODUCT

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

SCNM1 (A-6) is available conjugated to agarose (sc-376328 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376328 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376328 PE), fluorescein (sc-376328 FITC), Alexa Fluor® 488 (sc-376328 AF488), Alexa Fluor® 546 (sc-376328 AF546), Alexa Fluor® 594 (sc-376328 AF594) or Alexa Fluor® 647 (sc-376328 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376328 AF680) or Alexa Fluor® 790 (sc-376328 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SCNM1 (A-6) is recommended for detection of SCNM1 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 SCNM1 siRNA (h): sc-88500, SCNM1 siRNA (m): sc-153263, SCNM1 shRNA Plasmid (h): sc-88500-SH, SCNM1 shRNA Plasmid (m): sc-153263-SH, SCNM1 shRNA (h) Lentiviral Particles: sc-88500-V and SCNM1 shRNA (m) Lentiviral Particles: sc-153263-V.

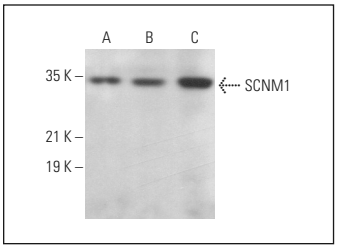
Molecular Weight of SCNM1: 30 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, CCRF-CEM cell lysate: sc-2225 or NAMALWA cell lysate: sc-2234.

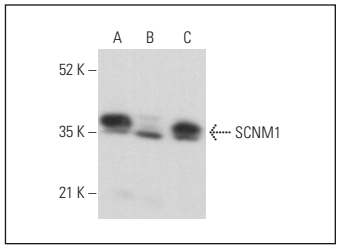
RECOMMENDED SUPPORT REAGENTS

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



SCNM1 (A-6): sc-376328. Western blot analysis of SCNM1 expression in RAW 264.7 (**A**) and 3611-RF (**B**) whole cell lysates and rat thymus tissue extract (**C**).



SCNM1 (A-6): sc-376328. Western blot analysis of SCNM1 expression in CCRF-CEM (**A**), Jurkat (**B**) and NAMALWA (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Iturrate, A., et al. 2022. Mutations in SCNM1 cause orofaciodigital syndrome due to minor intron splicing defects affecting primary cilia. Am. J. Hum. Genet. E-published.

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.