SANTA CRUZ BIOTECHNOLOGY, INC.

NURIM (B-1): sc-390174

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NURIM, also known as NRM or NRM29, is a 262 amino acid multi-pass membrane protein that localizes to the inner membrane of the nucleus. Existing as multiple alternatively spliced isoforms, NURIM is thought to possess enzymatic functions that may play a role in nuclear envelope (NE) dynamics. The gene encoding NURIM maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Rolls, M.M., Stein, P.A., Taylor, S.S., Ha, E., McKeon, F. and Rapoport, T.A. 1999. A visual screen of a GFP-fusion library identifies a new type of nuclear envelope membrane protein. J. Cell Biol. 146: 29-44.
2. Holmer, L. and Worman, H.J. 2001. Inner nuclear membrane proteins: functions and targeting. Cell. Mol. Life Sci. 58: 1741-1747.
3. Otsuki, T., Ota, T., Nishikawa, T., Hayashi, K., Suzuki, Y., Yamamoto, J., Wakamatsu, A., Kimura, K., Sakamoto, K., Hatano, N., Kawai, Y., Ishii, S., Saito, K., Kojima, S., Sugiyama, T., Ono, T., Okano, K., Yoshikawa, Y., Aotsuka, S., Sasaki, N., Hattori, A., et al. 2005. Signal sequence and keyword trap in silico for selection of full-length human cDNAs encoding secretion or membrane proteins from oligo-capped cDNA libraries. DNA Res. 12: 117-126.
4. Hofemeister, H. and O'Hare, P. 2005. Analysis of the localization and topology of nurim, a polytopic protein tightly associated with the inner nuclear membrane. J. Biol. Chem. 280: 2512-2521.
5. Shiina, T., Ota, M., Shimizu, S., Katsuyama, Y., Hashimoto, N., Takasu, M., Anzai, T., Kulski, J.K., Kikkawa, E., Naruse, T., Kimura, N., Yanagiya, K., Watanabe, A., Hosomichi, K., Kohara, S., Iwamoto, C., Umehara, Y., Meyer, A., Wanner, V., et al. 2006. Rapid evolution of major histocompatibility complex class I genes in primates generates new disease alleles in humans via hitchhiking diversity. Genetics 173: 1555-1570.

CHROMOSOMAL LOCATION

Genetic locus: NRM (human) mapping to 6p21.33; Nrm (mouse) mapping to 17 B1.

SOURCE

NURIM (B-1) is a mouse monoclonal antibody raised against a peptide mapping at the C-terminus of NURIM 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.

Blocking peptide available for competition studies, sc-390174 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NURIM (B-1) is recommended for detection of NURIM isoforms 1 and 2 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 NURIM siRNA (h): sc-95631, NURIM siRNA (m): sc-150128, NURIM shRNA Plasmid (h): sc-95631-SH, NURIM shRNA Plasmid (m): sc-150128-SH, NURIM shRNA (h) Lentiviral Particles: sc-95631-V and NURIM shRNA (m) Lentiviral Particles: sc-150128-V.

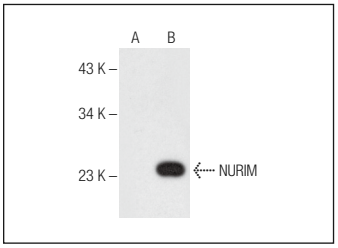
Molecular Weight of NURIM: 30 kDa.

Positive Controls: NURIM (m2): 293T Lysate: sc-122182 or IMR-32 nuclear extract: sc-2148.

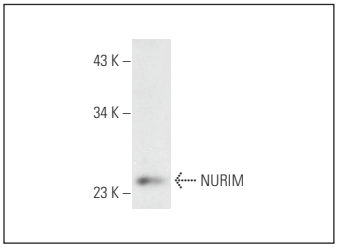
RECOMMENDED SUPPORT REAGENTS

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



NURIM (B-1): sc-390174. Western blot analysis of NURIM expression in non-transfected: sc-117752 (**A**) and mouse NURIM transfected: sc-122182 (**B**) 293T whole cell lysates.



NURIM (B-1): sc-390174. Western blot analysis of NURIM expression in IMR-32 nuclear extract.

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.