SANTA CRUZ BIOTECHNOLOGY, INC.

NgR3 (H-11): sc-515400

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NgR3 (Nogo-66 receptor-related protein 3), also known as RTN4RL1 (reticulon 4 receptor-like 1), NGRH2 or NGRL2 (Nogo receptor-like 2), is a 441 amino acid protein that belongs to the Nogo receptor family. Localized to the cell membrane, NgR3 contains 8 LRR (leucine-rich repeats). NgR3 is predominantly expressed in brain, where it localizes to the surface of neurons, but is also found at lower levels in lung, placenta, kidney, mammary gland, skeletal muscle, spleen and salivary gland. NgR3 is thought to play a role in the regulation of axonal regeneration and plasticity in the adult central nervous system. The gene that encodes NgR3 maps to human chromosome 17, which makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes.

REFERENCES

1. GrandPre, T., et al. 2000. Identification of the Nogo inhibitor of axon regeneration as a Reticulon protein. Nature 403: 439-444.
2. Wang, K.C., et al. 2002. Oligodendrocyte-myelin glycoprotein is a Nogo receptor ligand that inhibits neurite outgrowth. Nature 417: 941-944.
3. Barton, W.A., et al. 2003. Structure and axon outgrowth inhibitor binding of the Nogo-66 receptor and related proteins. EMBO J. 22: 3291-3302.
4. Pignot, V., et al. 2003. Characterization of two novel proteins, NgRH1 and NgRH2, structurally and biochemically homologous to the Nogo-66 receptor. J. Neurochem. 85: 717-728.

CHROMOSOMAL LOCATION

Genetic locus: RTN4RL1 (human) mapping to 17p13.3; Rtn4rl1 (mouse) mapping to 11 B5.

SOURCE

NgR3 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 381-399 near the C-terminus of NgR3 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.

NgR3 (H-11) is available conjugated to agarose (sc-515400 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515400 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515400 PE), fluorescein (sc-515400 FITC), Alexa Fluor® 488 (sc-515400 AF488), Alexa Fluor® 546 (sc-515400 AF546), Alexa Fluor® 594 (sc-515400 AF594) or Alexa Fluor® 647 (sc-515400 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515400 AF680) or Alexa Fluor® 790 (sc-515400 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515400 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

NgR3 (H-11) is recommended for detection of NgR3 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 NgR3 siRNA (h): sc-94025, NgR3 siRNA (m): sc-149955, NgR3 shRNA Plasmid (h): sc-94025-SH, NgR3 shRNA Plasmid (m): sc-149955-SH, NgR3 shRNA (h) Lentiviral Particles: sc-94025-V and NgR3 shRNA (m) Lentiviral Particles: sc-149955-V.

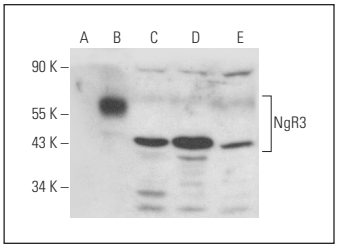
Molecular Weight of NgR3: 49 kDa.

Positive Controls: NgR3 (m): 293T Lysate: sc-125703, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

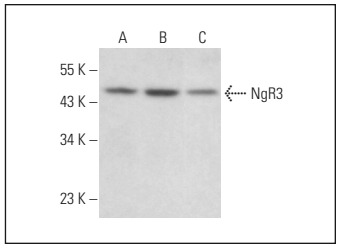
RECOMMENDED SUPPORT REAGENTS

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



NgR3 (H-11): sc-515400. Western blot analysis of NgR3 expression in non-transfected 293T: sc-117752 (**A**), mouse NgR3 transfected 293T: sc-125703 (**B**), U-87 MG (**C**), MCF7 (**D**) and K-562 (**E**) whole cell lysates.



NgR3 (H-11): sc-515400. Western blot analysis of NgR3 expression in SK-BR-3 (**A**), K-562 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, H., et al. 2021. Microglial HIV-1 expression: role in HIV-1 associated neurocognitive disorders. Viruses 13: 924.

STORAGE

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