

# NRAGE (AK47): sc-130434

## BACKGROUND

The neurotrophin family of growth factors (NGF) function to regulate neuronal differentiation, synaptic activity and neuronal survival, as well as axonal and dendritic growth. The melanoma-associated antigen (MAGE) family consists of a number of antigens recognized by cytotoxic T lymphocytes. Neurotrophin receptor-interacting MAGE homolog (NRAGE) binds the p75 neurotrophin receptor and associates with the plasma membrane when NGF binds p75NTR. The critical factors for NRAGE association lie within the juxtamembrane domain of p75NTR. Overexpression of NRAGE stimulates cell cycle arrest and allows NGF-dependent apoptosis within sympathetic neuron precursors cells. NRAGE is expressed in the medulla oblongata during development and motor-neurons. Structural similarities suggest NRAGE, and the MAGE protein necdin, (Ndn), mediate cell cycle effects through a shared mechanism.

## REFERENCES

1. Farinas, I. 1999. Neurotrophin actions during the development of the peripheral nervous system. *Microsc. Res. Tech.* 45: 233-242.
2. McAllister, A.K., et al. 1999. Neurotrophins and synaptic plasticity. *Annu. Rev. Neurosci.* 22: 295-318.
3. Okami, J., et al. 2000. Genetic detection for micrometastasis in lymph node of biliary tract carcinoma. *Clin. Cancer Res.* 6: 2326-2332.
4. Granelli, P., et al. 2000. Melanoma antigen genes 1 and 2 are differentially expressed in human gastric and cardiac carcinomas. *Scand. J. Gastroenterol.* 35: 528-533.
5. Klein, C., et al. 2000. Comparative analysis of genetically modified dendritic cells and tumor cells as therapeutic cancer vaccines. *J. Exp. Med.* 191: 1699-1708.
6. Busam, K.J., et al. 2000. Immunoreactivity with the anti-MAGE antibody 57B in malignant melanoma: frequency of expression and correlation with prognostic parameters. *Mod. Pathol.* 13: 459-465.
7. Kobayashi, Y., et al. 2000. Expression of MAGE, GAGE and BAGE genes in human liver diseases: utility as molecular markers for hepatocellular carcinoma. *J. Hepatol.* 32: 612-617.
8. Salehi, A.H., et al. 2000. NRAGE, NRAGE, a novel MAGE protein, interacts with the p75 neurotrophin receptor and facilitates nerve growth factor-dependent apoptosis. *Neuron* 27: 279-288.

## CHROMOSOMAL LOCATION

Genetic locus: MAGED1 (human) mapping to Xp11.22.

## SOURCE

NRAGE (AK47) is a mouse monoclonal antibody raised against recombinant NRAGE of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NRAGE (AK47) is recommended for detection of NRAGE of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NRAGE siRNA (h): sc-37320, NRAGE shRNA Plasmid (h): sc-37320-SH and NRAGE shRNA (h) Lentiviral Particles: sc-37320-V.

Molecular Weight of NRAGE: 97 kDa.

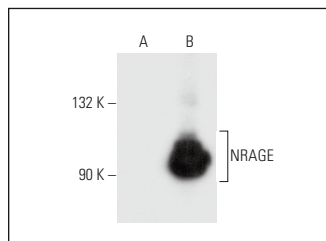
Positive Controls: Jurkat whole cell lysate: sc-2204 or SW-13 cell lysate: sc-24778.

## RECOMMENDED SUPPORT REAGENTS

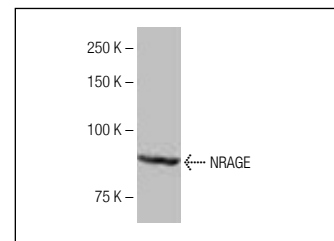
To ensure optimal results, the following support reagents are recommended:

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).

## DATA



NRAGE (AK47): sc-130434. Western blot analysis of NRAGE expression in non-transfected: sc-117752 (A) and mouse NRAGE transfected: sc-122121 (B) 293T whole cell lysates.



NRAGE (AK47): sc-130434. Western blot analysis of NRAGE expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Yang, Q., et al. 2016. NRAGE is involved in homologous recombination repair to resist the DNA-damaging chemotherapy and composes a ternary complex with RNF8-BARD1 to promote cell survival in squamous esophageal tumorigenesis. *Cell Death Differ.* 23: 1406-1416.

## 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](http://www.scbt.com) for detailed protocols and support products.