

NRSF (H-290): sc-25398

BACKGROUND

NRSF (neuron-restrictive silencer factor, also designated XBR and REST for RE1-silencing factor) is a silencer protein that binds the DNA sequence element NRSE (neuron-restrictive silencer element). The binding of NRSF to the NRSE represses neuronal gene transcription in non-neuronal cells. Although NRSF is most highly expressed in non-neuronal tissues, it is also expressed in developing neurons and at low levels in the brain. NRSF contains nine zinc-finger domains, but also exists as a C-terminally truncated form produced by alternative splicing. This variant, REST4, contains five of the zinc-finger domains and weakly binds DNA, yet is transported to the nucleus. NRSF associates with mSin3 and HDAC in ventricular myocytes, suggesting a role for NRSF outside the nervous system. Down-regulation of NRSF, which normally occurs upon neural differentiation, is necessary for the proper development of certain classes of neurons. NRSF is required to repress neuronal gene expression *in vivo*, in both extra-neuronal and undifferentiated neural tissue.

CHROMOSOMAL LOCATION

Genetic locus: REST (human) mapping to 4q12; Rest (mouse) mapping to 5 C3.3.

SOURCE

NRSF (H-290) is a rabbit polyclonal antibody raised against amino acids 1-290 of NRSF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25398 X, 200 µg/0.1 ml.

NRSF (H-290) is available conjugated to agarose (sc-25398 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

NRSF (H-290) is recommended for detection of NRSF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

NRSF (H-290) is also recommended for detection of NRSF in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NRSF siRNA (h): sc-38129, NRSF siRNA (m): sc-38130, NRSF shRNA Plasmid (h): sc-38129-SH, NRSF shRNA Plasmid (m): sc-38130-SH, NRSF shRNA (h) Lentiviral Particles: sc-38129-V and NRSF shRNA (m) Lentiviral Particles: sc-38130-V.

NRSF (H-290) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

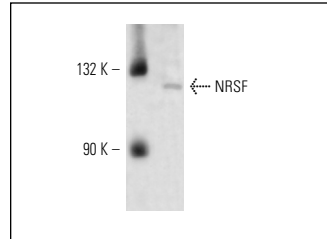
Molecular Weight of NRSF: 116 kDa.

Positive Controls: RAW 264.7 nuclear extract: sc-24961.

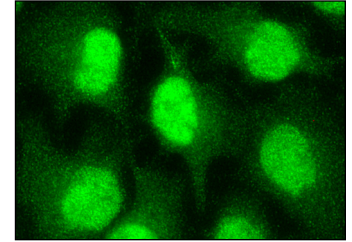
STORAGE

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

DATA



NRSF (H-290): sc-25398. Western blot analysis of NRSF expression in RAW 264.7 nuclear extract.



NRSF (H-290): sc-25398. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Moreno-Gonzalez, G., et al. 2008. Transcription of the chicken Grin1 gene is regulated by the activity of SP3 and NRSF in undifferentiated cells and neurons. *Biosci. Rep.* 28: 177-188.
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- Ekici, M., et al. 2008. Chromatin structure and expression of synapsin I and synaptophysin in retinal precursor cells. *Neurochem. Int.* 53: 165-172.
- Ekici, M., et al. 2008. Transcription of genes encoding synaptic vesicle proteins in human neural stem cells: chromatin accessibility, histone methylation pattern, and the essential role of rest. *J. Biol. Chem.* 283: 9257-9268.
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- Wang, H., et al. 2011. Genome-wide analysis reveals conserved and divergent features of Notch1/RBPJ binding in human and murine T-lymphoblastic leukemia cells. *Proc. Natl. Acad. Sci. USA* 108: 14908-14913.
- Zhang, Y., et al. 2011. Corepressor protein CDYL functions as a molecular bridge between polycomb repressor complex 2 and repressive chromatin mark trimethylated histone lysine 27. *J. Biol. Chem.* 286: 42414-42425.

RESEARCH USE

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


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Try **NRSF (F-3): sc-374611**, our highly recommended monoclonal alternative to NRSF (H-290). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NRSF (F-3): sc-374611**.