

# Neuregulin-1 (k1G13): sc-135811

## BACKGROUND

The neuregulins are a family of ErbB/HER ligands encoded by four genes. Neuregulin-1 gene, NRG1, encodes numerous splice variants with differing transcription initiation sites. Neuregulin-1 includes a range of isoforms with varying glycosylation, regulation of expression and function. Neuregulin-1 splice variants each bear an EGF-like domain, though otherwise have unique domain structures, differing functions and discrete tissue distribution. Six types of Neuregulin-1 isoform groups have been defined based on their structural features. Three types are most often described, type I (ARIA, NDF or HRG), type II (GGF) and type III (SMDF). Neuregulin-1 has been linked to schizophrenia and has diverse neural functions. Neuregulin-1 affects cell migration, the differentiation of neural crest and Schwann cells, and acts to upregulate the expression of acetylcholine receptors at muscle fibers during the formation of neuromuscular junctions.

## REFERENCES

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3. Marchionni, M.A., et al. 1993. Glial growth factors are alternatively spliced ErbB-2 ligands expressed in the nervous system. *Nature* 362: 312-318.
4. Meyer, D., et al. 1997. Isoform-specific expression and function of neuregulin. *Development* 124: 3575-3586.
5. Britsch, S., et al. 1998. The ErbB-2 and ErbB-3 receptors and their ligand, Neuregulin-1, are essential for development of the sympathetic nervous system. *Genes Dev.* 12: 1825-1836.
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8. Petyrshen, T.L., et al. 2005. Support for involvement of Neuregulin-1 in schizophrenia pathophysiology. *Mol. Psychiatry* 10: 366-374.
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## CHROMOSOMAL LOCATION

Genetic locus: NRG1 (human) mapping to 8p12.

## SOURCE

Neuregulin-1 (k1G13) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 20-241 of Neuregulin-1 isoform HRG-β3 of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

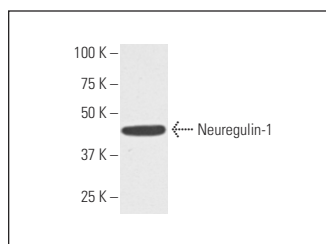
Neuregulin-1 (k1G13) is recommended for detection of Neuregulin-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Neuregulin-1 siRNA (h): sc-37210, Neuregulin-1 shRNA Plasmid (h): sc-37210-SH and Neuregulin-1 shRNA (h) Lentiviral Particles: sc-37210-V.

Molecular Weight of Neuregulin-1 isoforms: 26-71 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, A-673 cell lysate: sc-2414 or SK-N-MC cell lysate: sc-2237.

## DATA



Neuregulin-1 (k1G13): sc-135811. Western blot analysis of Neuregulin-1 expression in 293T whole cell lysate.

## 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.



See **Neuregulin-1 (E-12): sc-393006** for Neuregulin-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.