Neuregulin-1α/β1/2 (D-10): sc-393009

**BACKGROUND**

The neuregulins are a family of ERBB/HER ligands encoded by four genes. Neuregulin-1 gene, NRG-1, 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, ND, 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**


**CHROMOSOMAL LOCATION**

Genetic locus: NRG1 (human) mapping to Bp12; Nrg1 (mouse) mapping to 8A3.

**SOURCE**

Neuregulin-1α/β1/2 (D-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 414-425 near the C-terminus of Neuregulin-1 isoform HRG-α of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Neuregulin-1α/β1/2 (D-10) is available conjugated to agarose (sc-393009 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393009 HRP), 200 µg/ml, for WB, (HRP), and ELISA; to either phycoerythrin (sc-393009 PE), fluorescein (sc-393009 FITC), Alexa Fluor® 488 (sc-393009 AF488), Alexa Fluor® 546 (sc-393009 AF546), Alexa Fluor® 594 (sc-393009 AF594) or Alexa Fluor® 647 (sc-393009 AF647), 200 µg/ml, for WB (RGB), IF, (HRP) and FCM; and to either Alexa Fluor® 680 (sc-393009 AF680) or Alexa Fluor® 790 (sc-393009 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393009 P, (100 µg peptide in 0.5 ml PBS containing <0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**APPLICATIONS**

Neuregulin-1α/β1/2 (D-10) is recommended for detection of Neuregulin-1 isoforms HRG-α, HRG-α1A, HRG-α2B, HRG-β1, HRG-β2, and Type IV-β1a 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).

Neuregulin-1α/β1/2 (D-10) is also recommended for detection of Neuregulin-1 isoforms HRG-α, HRG-α1A, HRG-α2B, HRG-β1, HRG-β2, and Type IV-β1a in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Neuregulin-1 siRNA (h): sc-37210, Neuregulin-1 shRNA (m2): sc-270410, Neuregulin-1 shRNA Plasmid (h): sc-37210-SH, Neuregulin-1 shRNA Plasmid (m2): sc-270410-SH, Neuregulin-1 shRNA (h) Lentiviral Particles: sc-37210-V and Neuregulin-1 shRNA (m2) Lentiviral Particles: sc-270410-V.

Molecular Weight of HRG-α/HRG-α1A/HRG-α2B: 70/71/51 kDa.

Molecular Weight of HRG-β1/HRG-β2: 71/70 kDa.

Molecular Weight of Type IV-β1a: 65 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, MCF7 whole cell lysate: sc-2206 or A-673 cell lysate: sc-2414.

**DATA**

Neuregulin-1α/β1/2 (D-10) is sc-393009. Western blot analysis of Neuregulin-1α/β1/2 expression in A-431 (A), A431 (B), A-673 (C), SK-N-MC (D), MDA-MB-231 (E) whole cell lysates.

Neuregulin-1α/β1/2 (D-10) is sc-393009. Western blot analysis of Neuregulin-1α/β1/2 expression in HeLa (A), EOC20 (B), Neuro-2A (C), CB1 (D) and KN5F (E) whole cell lysates.

**SELECT PRODUCT CITATIONS**


**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.