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RABBIT ANTI-NEUREGULIN 1, TYPE III POLYCLONAL ANTIBODY

CATALOG NUMBER:	AB5551	**QUANTITY:**	100 µg
LOT NUMBER:		**CONCENTRATION:**	1 mg/mL
ALTERNATE NAMES:	NRG1 Type III, CRD-NRG1, SMDF	**EPITOPE:**	N terminal

BACKGROUND: The group of Neuregulin–1 proteins are cell-cell signaling molecules and are ligands for receptor tyrosine kinases of the ErbB/HER subfamily. Type III NRG1 proteins (sometimes referred to as CRD-NRG1s) play a critical role in neural development, including myelination, motor and sensory neuron survival, and neuromuscular synapse development (Falls, 2003). Defects in animals lacking type III NRG1s include retraction of nerve terminals from newly formed synapses, absence of Schwann cells from peripheral nerves, and loss of motor and sensory neurons (Wolpowitz et al., 2000). Available evidence indicates that most Type III NRG1 proteins are synthesized as transmembrane proteins with 2 TM domains, and that proteolytic processing produces a bioactive transmembrane form (NTFm) which serves as a juxtacrine signal (Wang, 2001; Falls, 2003).

SPECIFICITY: Neuregulin 1, type III. The antibody recognizes the proprotein and N-terminal fragment (NTFm) of all NRG1 Type III isoforms. On Western blot the apparent M.W.s of these forms are: ~140kDa (β1, β2 and β4 mature proproteins), ~76kDa (β1, β2 and β4 NTFs) and ~83kDa (β3 protein).

IMMUNOGEN: GST fusion protein from rat N-terminal sequence.

APPLICATIONS: Western blot: 10-20 µg/mL
Optimal working dilutions must be determined by the end user.

SPECIES REACTIVITY: Rat. Reactivity with other species has not been determined. It is expected that the antibody may also react with human due to the homology of the immunogen.

CONTROL: Positive: Neonatal brain.

FORMAT: Purified immunoglobulin.

PRESENTATION: Liquid.

STORAGE/HANDLING: Maintain at 2-8°C in undiluted aliquots for up to 6 months after date of receipt.

RELATED REFERENCES:

Falls DL (2003). Neuregulins: functions, forms, and signaling strategies. *Exp Cell Res* **284**: 14-29.

Wang JY, Miller SJ, and Falls DL (2001). The N-terminal region of neuregulin isoforms determines the accumulation of cell-surface and released neuregulin ectodomain. *J. Biol. Chem.* **276**: 2841-2851.

Wolpowitz, D. et al. (2000). Cysteine-rich domain isoforms of the neuregulin-1 gene are required for maintenance of peripheral synapses. *Neuron* **25***(1)*: 79-91.

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