

NRG1 Beta 1 Active Protein | NRG1 active protein

NRG1 Beta 1 Protein, Human, Recombinant (EGF Domain, Fc Tag)

CATALOG #
AAA257980

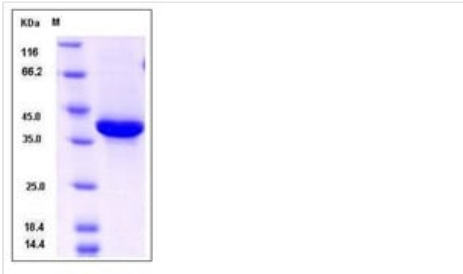
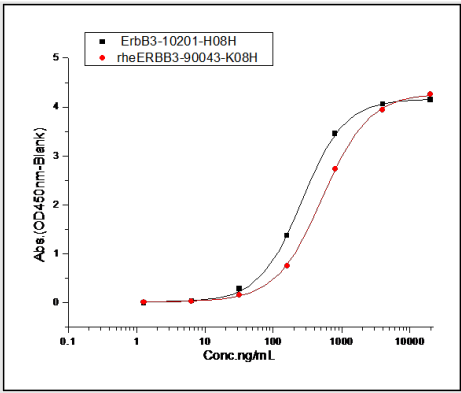
HOST
HEK293 Cells

PRODUCT SYNONYMS

NRG1 Beta 1; NRG1 Beta 1 Protein; Human; Recombinant (EGF Domain; Fc Tag); Human NRG1-beta 1 Protein (EGF Domain; ARIA Protein; GGF Protein; GGF2 Protein; HGL Protein; HRG Protein; HRG1 Protein; HRGA Protein; MST131 Protein; MSTP131 Protein; NDF Protein; Neuregulin 1 Protein; NRG1-IT2 Protein; SMDF Protein; neuregulin 1; NRG1 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>86% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Thr176-Lys 246
Species	Human
Activity	1. Measured by its binding ability in a functional ELISA. 2. Immobilized Rhesus ErbB3 at 2ug/mL (100uL/well) can bind human NRG1 (isoform Beta1). The EC50 of human NRG1 (isoform Beta1) is 0.58ug/mL. 3. Immobilized human ErbB3 at 2ug/mL (100uL/well) can bind human NRG1 (isoform Beta1). The EC50 of human NRG1 (isoform Beta1) is 0.43ug/mL.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Glu
Tag	N-human IgG1-Fc
Protein Construction	A DNA sequence encoding the EGF-like domain (Thr 176-Lys 246) of human NRG1 isoform beta1 (Q02297-6) was fused with the Fc region of human IgG1 at the N-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.



SDS-PAGE

Application Data

Measured by its binding ability in a functional ELISA. 1. Immobilized Rhesus ErbB3 at 2 ug/mL (100 ul/well) can bind human NRG1 (isoform Beta1), The EC50 of human NRG1 (isoform Beta1) is 0.58 ug/mL. 2. Immobilized human ErbB3 at 2 ug/mL (100 ul/well) can bind human NRG1 (isoform Beta1), The EC50 of human NRG1 (isoform Beta1) is 0.43 ug/mL.

ADDITIONAL INFORMATION

Related Product Information for NRG1 active protein

Background: Neuregulin 1 or NRG1 is one of four proteins in the neuregulin family that act on the EGFR family of receptors. This growth factor was originally identified as a 44-kD glycoprotein that interacts with the NEU/ERBB2 receptor tyrosine kinase to increase its phosphorylation on tyrosine residues. NRG1 is a trophic factor that has been implicated in neural development, neurotransmission, and synaptic plasticity. NRG1 has multiple isoforms that are generated by the usage of different promoters and alternative splicing of a single gene. Neuregulin 1 (NRG1) is essential for the development and function of multiple organ systems, and its dysregulation has been linked to diseases such as cancer and schizophrenia. NRG1 is a schizophrenia candidate gene and plays an important role in brain development and neural function. Schizophrenia is a complex disorder, with etiology likely due to epistasis.

References

Nicodemus KK, et al. (2010) Biological validation of increased schizophrenia risk with NRG1, ERBB4, and AKT1 epistasis via functional neuroimaging in healthy controls. Arch Gen Psychiatry. 67 (10): 991-1001. Tan W, et al. (2007) Molecular cloning of a brain-specific, developmentally regulated neuregulin 1 (NRG1) isoform and identification of a functional promoter variant associated with schizophrenia. J Biol Chem. 282 (33): 24343-51. Holmes WE, et al. (1992) Identification of heregulin, a specific activator of p185erbB2. Science. 256 (5060): 1205-10.

NCBI AND UNIPROT INFORMATION

NCBI GI #	236461509
NCBI GeneID	3084
NCBI Accession #	NP_001153467.1
NCBI GenBank Nucleotide #	NM_001159995.1
UniProt Accession #	Q02297; O14667; P98202; Q02298; Q02299; Q07110; Q07111; A5YAK4; A5YAK5; A8K1L2; B7Z4Z3; E9PHH4
Molecular Weight	70,392 Da
NCBI Official Full Name	pro-neuregulin-1, membrane-bound isoform isoform HRG-beta1c
NCBI Official Synonym Full Names	neuregulin 1
NCBI Official Symbol	NRG1
NCBI Official Synonym Symbols	GGF; HGL; HRG; NDF; ARIA; GGF2; HRG1; HRGA; SMDF; MST131
NCBI Protein Information	pro-neuregulin-1, membrane-bound isoform; MSTP131; pro-NRG1; glial growth factor; neu differentiation factor; neuregulin 1 type IV beta 3; neuregulin 1 type IV beta 1a; sensory and motor neuron derived factor; heregulin, alpha (45kD, ERBB2 p185-activator)

UniProt Protein Name	Pro-neuregulin-1, membrane-bound isoform
UniProt Gene Name	NRG1
UniProt Synonym Gene Names	GGF; HGL; HRGA; NDF; SMDF; Pro-NRG1; ARIA; HRG
UniProt Entry Name	NRG1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/nrg1-beta-1/257980>