

Neuregulin-1 Active Protein | NRG1 active protein

Neuregulin-1 Protein, Canine, Recombinant (ECD)

CATALOG #
AAA258259

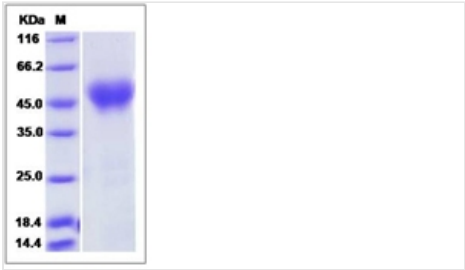
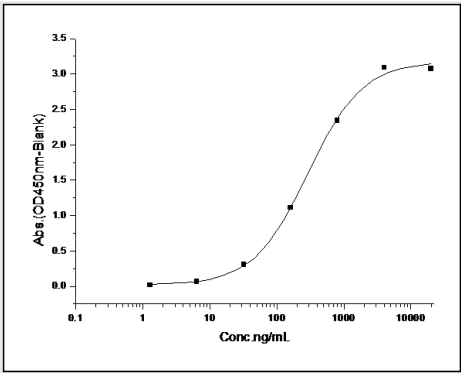
HOST
HEK293 Cells

PRODUCT SYNONYMS

Neuregulin-1; Neuregulin-1 Protein; Canine; Recombinant (ECD); Canine NRG1/Neuregulin 1 Protein; neuregulin 1; NRG1 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% 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	Ser19-Lys240
Species	Canine
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Ser 19
Tag	C-cleavage
Protein Construction	A DNA sequence encoding the canine NRG1 (XP_858147.1) extracellular domain (Ser19-Lys240) was expressed with five amino acids (DDDDK) at the C- terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	Measured by its binding ability in a functional ELISA. Immobilized canine NRG1 at 10ug/ml (100uL/well) can bind human ErbB4-Fc. The EC50 of human ErbB4-Fc is 0.19-0.43ug/ml.
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. Immobilized canine NRG1 at 10 ug/ml (100 ul/well) can bind human ErbB4-Fc, The EC50 of human ErbB4-Fc is 0.19-0.43 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

Molecular Weight	The recombinant canine NRG1 comprises 228 amino acids and has a predicted molecular mass of 24.7kDa. The apparent molecular mass of the protein is approximately 47kDa in SDS-PAGE under reducing conditions due to glycosylation.
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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.