Data Sheet (Cat.No.TMPY-02098)

TargetMol

NRXN3 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	neurexin 3;C14orf60
Protein Construction:	A DNA sequence encoding the human NRXN3 isoform 2 (NP_620426.2) extracellular domain (Met 1-Thr 357) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 36
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9HDB5-2
Molecular Weight:	61.6 kDa (predicted); 75-85 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Neurexin-3-beta, also known as Neurexin III-beta and NRXN3, is a single-pass type I membrane protein that belongs to the neurexin family. It contains one laminin G-like domain. It is a neuronal cell surface protein that may be involved in cell recognition and cell adhesion. Neurexins are a family of proteins that function in the vertebrate nervous system as cell adhesion molecules and receptors. They are encoded by several unlinked genes of which

two, NRXN1 and NRXN3, are among the largest known human genes. Three of the genes (NRXN1, NRXN2, NRXN3) utilize two alternate promoters and include numerous alternatively spliced exons to generate thousands of distinct mRNA transcripts and protein isoforms. The majority of transcripts are produced from the upstream promoter and encode alpha-neurexin isoforms; a much smaller number of transcripts are produced from the downstream promoter and encode beta-neurexin isoforms. The alpha-neurexins contain EGF-like sequences and laminin G domains and have been shown to interact with neurexophilins. The beta-neurexins lack EGF-like sequences and contain fewer laminin G domains than alpha-neurexins. NRXN3 has been linked to a genetic predisposition towards some conditions such as alcohol or drug addiction, or obesity.

Reference

Occhi G. et al., 2002, Biochem. Biophys. Res. Commun. 298:151-5.Rowen L, et al., 2002, Genomics. 79 (4): 587-97. Olsen J.V. et al., 2006, Cell 127:635-48.Hishimoto A, et al., 2007, Human Molecular Genetics.16 (23): 2880-91. Oppermann F.S. et al., 2009, Mol. Cell. Proteomics 8:1751-64.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481