NRXN1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	NRXN1, Polyclonal Antibody
Full Product Name	NRXN1 (Neurexin-1-alpha, Neurexin I-alpha, KIAA0578) (MaxLight 650)
Product Gene Name	anti-NRXN1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650.
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human Neurexin-1-alpha. Species Crossreactivity: mouse and rat. Species sequence homology: chimpanzee, rhesus macaque, canine, bovine (100%).
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
OMIM	600565
3D Structure	ModBase 3D Structure for Q9ULB1
Immunogen	Synthetic linear peptide corresponding to human Neurexin-1-alpha at the extracellular laminin G-like 3 domain (KLH).
Conjugate	MaxLight650
Positive Control	Human cerebellum tissue lysate
Note	Preservative Free
Product Categories/Family for anti-NRXN1 antibody	Antibodies; Neuroscience
Applications Tested/Suitable for anti-NRXN1 antibody	Immunohistochemistry (IHC), Western Blot (WB)
Application Notes for anti-NRXN1 antibody	IHC: 1:100 WB: 0.1ug/ml Applications are based on unconjugated antibody.
Related Product Information for anti-NRXN1 antibody	MBS6269921 is an antibody targeting NRXN1. Also known as NRXN1 (Neurexin-1-alpha, Neurexin I-alpha, KIAA0578) (MaxLight 650). Reactive in Human, Mouse, Rat. Host: Rabbit.
Product References and Citations for anti-NRXN1 antibody	1. Dean, C., et al. (2003). Nat Neurosci. 6:708-716. 2. Missler, M. and Sudhof, T. C., (1998). TIG. 14:20-26.
Other Notes	Small volumes of anti-NRXN1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NRXN1. It may not necessarily be applicable to this product.

NCBI GI #	14149613
NCBI GeneID	9378
NCBI Accession #	NP_004792
UniProt Primary Accession #	Q9ULB1
UniProt Related Accession #	P58400; Q9ULB1
GenBank Nucleotide #	NP_004792.1
NCBI Official Full Name	neurexin-1 isoform alpha1
NCBI Official Synonym Full Names	neurexin 1
NCBI Official Symbol	NRXN1
NCBI Official Synonym Symbols	PTHSL2; SCZD17; Hs.22998
UniProt Protein Name	Neurexin-1
UniProt Synonym Protein Names	Neurexin I-alpha; Neurexin-1-alpha
Protein Family	Neurexin
UniProt Gene Name	NRXN1
UniProt Synonym Gene Names	KIAA0578
UniProt Entry Name	NRX1A_HUMAN
NCBI Protein Information	neurexin-1
NCBI Summary for NRXN1	This gene encodes a single-pass type I membrane protein that belongs to the neurexin family. Neurexins are cell-surface receptors that bind neuroligins to form Ca(2+)-dependent neurexin/neuroligin complexes at synapses in the central nervous system. This complex is required for efficient neurotransmission and is involved in the formation of synaptic contacts. Three members of this gene family have been studied in detail and are estimated to generate over 3,000 variants through the use of two alternative promoters (alpha and beta) and extensive alternative splicing in each family member. Recently, a third promoter (gamma) was identified for this gene in the 3' region. Mutations in this gene are associated with Pitt-Hopkins-like syndrome-2 and may contribute to susceptibility to schizophrenia. [provided by RefSeq, Aug 2016]

UniProt Comments for NRXN1	NRXN1: Cell surface protein involved in cell-cell-interactions, excytosis of secretory granules and regulation of signal transmission. Function is isoform-specific. Alpha-type isoforms have a long N-terminus with six laminin G-like domains and play an important role in synaptic signal transmission. Alpha-type isoforms play a role in the regulation of calcium channel activity and Ca(2+)-triggered neurotransmitter release at synapses and at neuromuscular junctions. They play an important role in Ca(2+)- triggered exocytosis of secretory granules in pituitary gland. They may effect their functions at synapses and in endocrine cells via their interactions with proteins from the exocytotic machinery. Likewise, alpha-type isoforms play a role in regulating the activity of postsynaptic NMDA receptors, a subtype of glutamate-gated ion channels. Both alpha-type and beta-type isoforms may play a role in the formation or maintenance of synaptic junctions via their calcium-dependent interactions (via the extracellular domains) with neuroligin family members, CBLN1 or CBLN2. In vitro, triggers the de novo formation of presynaptic structures. May be involved in specification of excitatory synapses. Alpha-type isoforms were first identified as receptors for alpha-latroxin from spider venom. Belongs to the neurexin family. 4 isoforms of the human protein are produced by alternative promoter. Protein type: Receptor, misc.; Membrane protein, integral Chromosomal Location of Human Ortholog: 2p16.3 Cellular Component: presynaptic membrane; cell surface; integral to plasma membrane; endocytic vesicle; integral to membrane; plasma membrane; cell junction Molecular Function: protein binding; metal ion binding; calcium channel regulator activity; acetylcholine receptor binding; receptor activity; calcium ion binding; cell adhesion molecule binding; calcium-dependent protein binding; receptor binding Biological Process: axon guidance; extracellular matrix organization and biogenesis; prepulse inhibition; neurotransmitter secretion; social behavior; vocal learning; learning; positive regulation of synaptic transmission, glutamatergic; cerebellar granule cell differentiation; negative regulation of filopodium formation; heterophilic cell adhesion; synaptic transmission; positive regulation of synaptogenesis; establishment of protein localization; synaptogenesis; adult behavior; calcium-dependent cell-cell adhesion; neuron adhesion; angiogenesis; neuromuscular process controlling balance Disease: Pitt-hopkins-like Syndrome 2; Chromosome 2p16.3 Deletion Syndrome
Research Articles on NRXN1	**1.** NRXN1-the first mutation, cytosine was replaced by thymine at position 1405 (c.1405C>T), presumably causing the replacement of proline by serine at P 469 (p.Pro469Ser) [rs7850316]; the second mutation, adenine was replaced by guanine at position 4053 (c.4053A>G), resulting in the replacement of alanine by alanine at the 1351 position (p.Ala1351Ala) [rs7997075]. Father was found carrier for c.1405C>T variant (p.Pro469Ser)
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