

Product datasheet for **RR208761**

Nrxn1 (NM_021767) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nrxn1 (NM_021767) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Nrxn1
Synonyms: Nrxn1b
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR208761 representing NM_021767
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGGATCGCC

ATGGGGACGGCGCTGGTCCAGCATGGGGGCTGCTGTCTCCTCTGCCTGTCGCTGCTGCTGTTGGGCTGCT
 GGGCAGAGCTGGGCAGTGGGCTGGAGTCCCAGGCGCTGAGGGCCAGTGGACGCGCTTCCCCAAGTGAA
 CGCGTGCTGCGAGAGTGAGATGAGCTTCCAGCTGAAGACACGCAGCGCCCGCGGCTCGTCTACTTC
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ATGGCCTCATCTTGTAGCCATGGCAAGCCAAGACATCAGAAGGATGCCAAGCACCCGAGATGATTAA
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 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR208761 representing NM_021767
 Red=Cloning site Green=Tags(s)

MGTALVQHGGCCLLCLLLLLGCWAELGSGLEFPGAEGQWTRFPKWNACCESEMSFQKTRARGLVLYF
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 SGGGSPCEAGDEGDGGVCLNGGVC SVVDDQAVCDSCRTGFRGKDCSQEDNNVEGLAHLMMGDQKSKGKE
 EYIATFKGSEYFCYDL SQNPIQSSDEITLSFKTLQRNGLMLHTGKSADYVNLALKNGAVSLVINLGS
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 IKIKALQKKVNDGEWYHVDFQRDGRSGTISVNTLRTPYTAGGESEILDLDDEL YLGGLPENKAGLVFPT
 VWTALLNYGYVGCIRDLFIDGQSKDIRQMAEQSTAGVKPSCSRETAKPCLSNPCKNNGMCRDGNRYVC
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 GCLASVDLNGRLPDLISDALFCNGQIERGCEGPSTTCQEDSCSNQGVCLQQWDGFS CDCSMTSFSGLPCN
 DPGTTYIFSKGGGQITHKWPNDRPSRADRLAIGFSTVQKEAVLVRVSSSGLGDYLELHIHQKIGVK
 FNVGTDIIAIEESNAIINDGKYHVVRFRSGGNATLQVDSWPVIERYPAGNNDNERLAIARQIRIPYRLGR
 VVDEWLLDKGRQLTIFNSQATIIIGGKEQGQPFQGLSGLYYNGLKVLNMAAENDANIAI VGNVRLVGEV
 PSSMTESTATAMQSEMSTSIMETTTTLLATSTARRGKPPTKEPISQTTDDILVASECPDDEDIDPCEP
 SSGGLANPTRVGGREPYPGSAEVIRESSTTGMVVGIVAAAALCIL ILLYAMYKYRNRDEGSYHVDES
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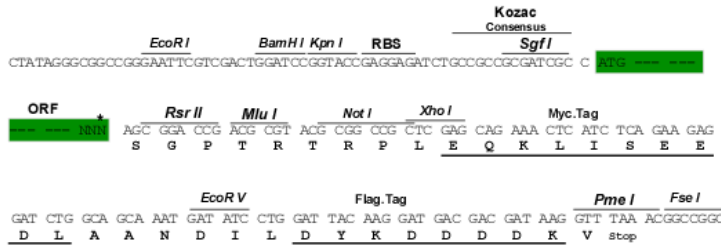
SGPTRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-RsrII

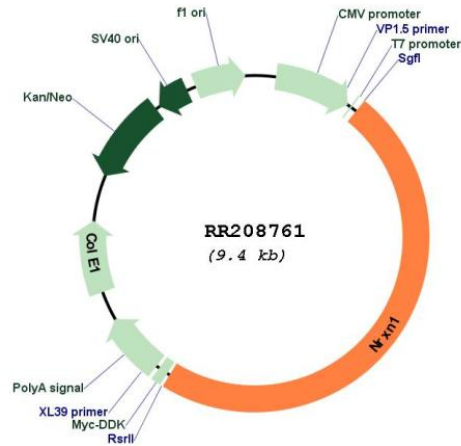
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_021767

ORF Size: 4521 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_021767.2](#), [NP_068535.2](#)

RefSeq Size: 5609 bp

RefSeq ORF: 4524 bp

Locus ID: 60391

UniProt ID: [Q63372](#)

Cytogenetics: 6q12

MW: 165.4 kDa

Gene Summary: This gene encodes a single-pass type I membrane protein that belongs to the neurexin family. Neurexins are synaptic transmembrane receptors that bind endogenous ligands that include neuroligins, dystroglycan, and neurexophilins. Neurexin complexes are required for efficient neurotransmission and are involved in synaptogenesis. In vertebrates, alternate promoter usage results in multiple isoform classes, of which the alpha and beta classes are the best characterized. In humans, allelic variants in this gene are associated with Pitt-Hopkins-like syndrome-2, while deletions have been associated with autism and schizophrenia. Mouse knockouts display decreased spontaneous and evoked vesicle release resulting in impaired synaptic transmission. In addition, knockout mice show altered social approach, reduced social investigation, reduced locomotor activity, and in males, increased aggression. [provided by RefSeq, Nov 2016]