

Product datasheet for MR203927

Stx1a (NM_016801) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Stx1a (NM_016801) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Stx1a
Synonyms:	HPC-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR203927 representing NM_016801 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGGATCGCC**

ATGAAGGACCGAACCAGGAGCTCCGCACGGCCAAGGACAGCGATGACGACGACGATGTCCTGTCCTG
TGGACCGAGACCGCTTCATGGATGAATTCCTTGAACAGGTGGAAGAGATCCGGGGCTTTATTGACAAGAT
TGCCGAAAACGTGGAGGAGGTGAAGCGGAAACACAGCGCCATCCTGGCCTCCCCGAACCCCGATGAGAAG
ACAAAGGAGGAACTGGAGGAGCTCATGTCGGACATTAAGAAGACAGCGAACAAGTTCGCTCCAAGCTAA
AGAGCATTGAGCAGAGCATCGAGCAGGAGGAAGGTCTGAACCGCTCATCAGCCGACCTGAGGATCCGGAA
GACGCAGCACTCCACGCTGTCCCGAAAATTTGTGGAGGTGATGTCGAGTACAACGCCACTCAGTCAGAC
TACCGAGAACGCTGCAAAGGGCGCATCCAGAGGACGCTGGAGATCACCGCCGGACCACGACCAGTGAGG
AATTGGAAGACATGCTGGAGAGTGGGAACCCTGCCATCTTTGCCTCTGGGATCATCATGGACTCCAGCAT
CTCGAAGCAGGCCCTCAGTGAGATCGAGACCAGACACAGTGAGATCATCAAGCTGGAGACCAGCATCCGG
GAGCTGCACGACATGTTTCATGGACATGGCCATGCTGGTGGAGAGCCAGGGGGAGATGATTGACAGGATCG
AGTACAATGTGGAGCACGCCGTGGACTACGTGGAGAGGGCCGTGTGAGACCAAGAAGGCCGTCAAGTA
CCAGAGCAAGGCCGCGCAGGAAGAAGATCATGATCATCATTTGCTGTGTGATTCTGGGCATCATCATCGCC
TCCACCATCGGGGCATCTTTGGA

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR203927 representing NM_016801
Red=Cloning site Green=Tags(s)

MKDRTQELRTAKDSDDDDVTVTVD RDRFMDEFFEQVEEIRGFIDKIAENVEEVKRKHSAILASPNPDEK
 TKEELEELMSDIKKTANKVRSKLSIEQSI EQEELNRSSADLRIRKTHSTLSRKFVEVMSEYNATQSD
 YRERCKGRIQRQLEITGRITTTSEELDMLESGNPAIFASGIIMDSISIKQALSEIETRHSEIIKLETSIR
 ELHDMFMDMAMLVESQGEMIDRIEYNVEHAVDYVERAVSDTKKAVKYQSKARRKKIMIIICCVILGIIIA
 STIGGIFG

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_016801

ORF Size: 864 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_016801.4](#), [NP_058081.2](#)

RefSeq Size: 2071 bp

RefSeq ORF: 867 bp

Locus ID: 20907

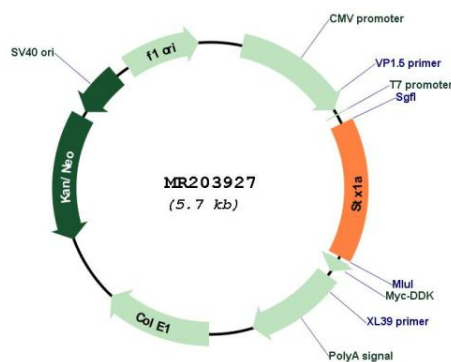
UniProt ID: [O35526](#)

Cytogenetics: 5 G2

MW: 33.5 kDa

Gene Summary: Plays an essential role in hormone and neurotransmitter calcium-dependent exocytosis and endocytosis (PubMed:17502420, PubMed:28596237, PubMed:28031464). Part of the SNARE (Soluble NSF Attachment Receptor) complex composed of SNAP25, STX1A and VAMP2 which mediates the fusion of synaptic vesicles with the presynaptic plasma membrane. STX1A and SNAP25 are localized on the plasma membrane while VAMP2 resides in synaptic vesicles. The pairing of the three SNAREs from the N-terminal SNARE motifs to the C-terminal anchors leads to the formation of the SNARE complex, which brings membranes into close proximity and results in final fusion. Participates in the calcium-dependent regulation of acrosomal exocytosis in sperm (PubMed:12101244). Plays also an important role in the exocytosis of hormones such as insulin or glucagon-like peptide 1 (GLP-1) (PubMed:17502420, PubMed:28596237, PubMed:28031464).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR203927