

## Product datasheet for **MG203927**

### Stx1a (NM\_016801) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Stx1a (NM\_016801) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Stx1a  
**Synonyms:** HPC-1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG203927 representing NM\_016801  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAAGGACCGAACCAGGAGCTCCGCACGGCCAAGGACAGCGATGACGACGACGATGTCCTGTCCTG  
TGGACCGAGACCGCTTCATGGATGAATTCTTTGAACAGGTGGAAGAGATCCGGGGCTTTATTGACAAGAT  
TGCCGAAAACGTGGAGGAGGTGAAGCGGAAACACAGCGCCATCCTGGCCTCCCCGAACCCCGATGAGAAG  
ACAAAGGAGGAACTGGAGGAGCTCATGTCGGACATTAAGAAGACAGCGAACAAGTTCGCTCCAAGCTAA  
AGAGCATTGAGCAGAGCATCGAGCAGGAGGAAGGTCTGAACCGCTCATCAGCCGACCTGAGGATCCGGAA  
GACGCAGCACTCCACGCTGTCCCGAAAATTTGTGGAGGTGATGTCGAGTACAACGCCACTCAGTCAGAC  
TACCGAGAACGCTGCAAAGGGCGCATCCAGAGGACGCTGGAGATCACCGCCGGACCACGACCAGTGAGG  
AATTGGAAGACATGCTGGAGAGTGGGAACCCTGCCATCTTTGCCTCTGGGATCATCATGGACTCCAGCAT  
CTCGAAGCAGGCCCTCAGTGAGATCGAGACCAGACACAGTGAGATCATCAAGCTGGAGACCAGCATCCGG  
GAGCTGCACGACATGTTTCATGGACATGGCCATGCTGGTGGAGAGCCAGGGGGAGATGATTGACAGGATCG  
AGTACAATGTGGAGCACGCCGTGGACTACGTGGAGAGGGCCGTGTGAGACCAAGAAGGCCGTCAAAGTA  
CCAGAGCAAGGCCGCGCAGGAAGAAGATCATGATCATCATTTGCTGTGTGATTCTGGGCATCATCATCGCC  
TCCACCATCGGGGCATCTTTGGA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG203927 representing NM\_016801  
Red=Cloning site Green=Tags(s)

MKDRTQELRTAKSDDDDDVTVTVD RDRFMDEFFEQVEEIRGFIDKIAENVVEVKRKHSAILASPNPDEK  
 TKEELEELMSDIKKTANKVRSKLSIEQSI EQEELNRSSADLRIRKTQHSTLSRKFVEVMSEYNATQSD  
 YRERCKGRIQRQLEITGRITTTSEELEDMLESGNPAIFASGIIMDSISISKQALSEIETRHSEIIKLETSIR  
 ELHDMFMDMAMLVESQGEMIDRIEYNVEHAVDYVERAVSDTKKAVKYQSKARRKKIMIIICCVILGIIIA  
 STIGGIFG

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**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

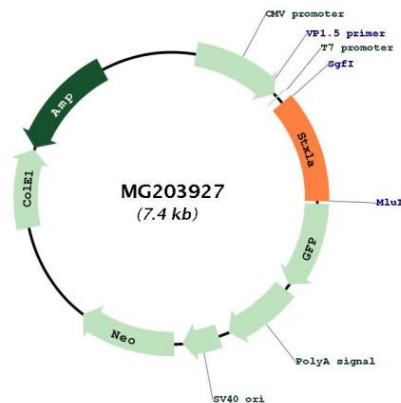
**Locus ID:** 20907

**UniProt ID:** [O35526](#)

**Cytogenetics:** 5 G2

**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 MG203927