

## Product datasheet for **MG223105**

### Astn2 (NM\_207109) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Astn2 (NM_207109) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Astn2
Synonyms:	1d8; Astnl; bM452j22.1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG223105 representing NM_207109 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCGCCCGCCGGCCGCCGGCGCAGCCCGGGCCCGGCTTGGGGCTTCGGGGCCGGCCGAGGCTCGGCT  
TCCACCCGGGGCCCGCCGCCACCGCCCGCCGCTGCTGTTGCTGTTTCTGCTCTGCTGCCGCCGCC  
GCCGTTGCTGGCCGGCCACGGCCGCCCGCTCGCGGAGCCGACAGCCCATGCCGGCTCAAGACC  
GTCACCGTATCCACGCTGCCGCTCTGCGGAAAGCGACATCGGCTGGAGCGGTGCCCGACCGGGGCC  
CGGCCGGGCTGGGGCCGGGACCGAGCCGGGCGGAGCTGCTGCTGCTGCCGCTCCGCCGCTCCCC  
GGGCTCCGCGGGTTCAGCCGGCACAGCCCGGAGTCTCGTCTCCTTCTCTTTGTGCGTAATGAGTCCCC  
GGGCGCATCGCGGTACAAGATGACCTGGACAACACTGAGCTGCCCTTCTTACCCTGGAGATGTCTGGCA  
CAGCAGCGGACATTTCTTTGGTTCACTGGAGGCAGCAGTGGTGGAGAATGGCACATTGTACTTCCACGT  
TTCCATGAGCAGCTCTGGCAACTGGCTCAGGCCACTGCTCCACACTCCAGGAGCCCTCGGAGATCGTT  
GAGGAACAGATGCATATCCTCCACATTTCTGTGATGGGTGGACTCATTGCACTTCTCCTCTGCTGTTGG  
TGTTACAGTGGCACTGTATGCCAGCGACGCTGGCAGAAGCGCCGGCGCATCCACAGAAGAGCGCAAG  
TACAGAAGCTACTCATGAGATTCATACATCCCATCAGTGTCTGCTGGTCCCTCAGGCCAGGAAAGCTTC  
CGATCTCCAGACTTCAGACACACAACACTCAGTCATTGGTGTGCCTATCCGGGAAACCCCATCCTGGATG  
ACTATGACTATGAAGAGGAGGAGGAACCCAGGCGAGCCAACCACGCTCCCGTGAGGATGAGTTTGG  
TAGCCAGATGACCCATGCCCTGGACAGCTTGGGAAGGCCAGGAGAAGAGAAAGTGAATTTGAGAAGAAA  
GCAGCAGCTGAGGCGACACAGGAAACAGTGGAGTCCCTGATGCAGAAGTTCAAGGAGAGTTTCCGTGCTA  
ACACACCAGTGGAGATCGGTGAGTTGCAGCCAGCCTCGCGCAGCAGCACCTCTGCAGGAAAGAGGAAGCG  
GAGGAACAAATCTCGAGGGGGAATCAGCTTTGGGAGAACCAAGGGGACATCAGGCTCAGAAGCAGATGAC  
GAAACACAGCTGACCTTCTACACAGAGCAGTACCGCAGTCCGCCCGCAGCAAAGTTTACTGAAAAGCC  
CTGTGAATAAGACAGCCTTAACACTGATTGCTGTGAGCTCCTGCATCTTGCCATGGTGTGTGGCAACCA  
GATGTCCTGTCCACTTACTGTGAAGTGACTTTGCATGTGCCTGAACACTTCATTGCAGATGGGAGCAGC



[View online »](#)

TTTGTGGTGAGTGAAGGAAGCTACCTGGATATCTCCGATTGGCTAAACCCTGCCAAGCTGTCTCTGTATT  
 ACCAGATCAATGCCACCTCGCCATGGGTGAGAGACCTCTGTGGACAGAGGACGACAGATGCCTGTGAACA  
 GCTCTGTGACCCAGATACTGGGGAGTGCAGTTGTCATGAAGGTTACGCCCTGACCCAGTCCACAGACAT  
 CTATGTGTTTCGACAGTACTGGGGTCAAAGTGAAGGACCTTGGCCTTACACAACACTGGAGAGGGGCTATG  
 ATCTGGTGACAGGAGACAAGCCCTGAAAAGATTCTCAGGCTACTTTCAGCTTGGGCCAAGGCCTCTG  
 GCTTCCGGTCAGCAAAAGCTTTGTGGTGCCACCCGGTGGAGCTGCCATCAACCCCTGGCCAGCTGCAAG  
 ACGGATGTGCTCGTCACAGAAGACCCCTGGGGATGTCAGGGAAGAAGCAATGTTGCCAGTACTTTGAAA  
 CCATCAACGACCTGCTGTCCTCCTTTGGTCCAGTCCGTGACTGCTCAAGGAACAACGGGGGCTGTACCCG  
 TAACCTCAAGTGTGTGTCTGACCGCCAGGTGGACTCCTCGGGATGTGTGTCTGAGGAACTGAAGCCC  
 ATGAAGGATGGCTCTGGCTGCTATGATCACTCCAAGGGCATCGACTGCTCTGATGGCTTTAATGGAGGGT  
 GTGAGCAGCTTTGCCTACAACAACACTGCCTTTGCCCTATGATACCACCTCCAGCACCATCTTCATGTT  
 CTGCGGCTGTGTGAAGAGTACAAGCTGGCTCCTGATGGGAAATCCTGTCTAATGCTCTCAGATGTCTGT  
 GAGGGCCCAAGTGCCTCAAACCTGACTCCAAATTCATGACACCCTCTTTGGAGAGATGCTACATGGTT  
 ACAACAACCGGACACAACATGTAACAAGGCCAAGTCTTCAAATGACATTCAGGGAGAATAAATTCAT  
 CAAGGACTTTCCACAGCTGGCAGATGGGCTGTTGGTGATCCCGCTGCCAGTGAAGAGCAATGCCGGGG  
 GTTCTCTCTGAGCCCTTCCAGACCTTCAGCTTCTCACAGGAGACATCAGGTATGATGAGGCCATGGGGT  
 ACCCCATGGTGCAACAGTGGCGTGTCCGGAGCAATCTCTATCGTGTGAAGCTGAGTACTATCACCCCTCTC  
 AGCAGGCTTACCAATGTCTAAAGATCCTGACCAAAGAGAGCAGTCCGGATGAGCTGCTGTCTTCATC  
 CAGCACTATGGCTCCCACTACATTGCCGAGGCTTTATACGGTTCTGAGCTCACCTGCATCATCCATTTTC  
 CCAGCAAGAAGGTCCAGCAGCAGCTATGGCTCCAATATCAGAAAGAGACCACGGAGCTGGGCAGCAAGAA  
 GGAGCTCAAGTCCATGCCCTTATCACCTACCTCTCCGGTCTCCTGACAGCCAGATGCTATCAGATGAC  
 CAGCTCATCTCAGGTGTGGAGATTGATGTGAGGAGAAGGGCCGCTGCCATCTACCTGTACCTTTGCC  
 GCCGGCAGGCAAGAGCAGCTGAGCCCCACACCAGTGTCTGCTGGAGATAAACCCTGTGGTCCACTTTA  
 TACCCCTCATCCAAGACAATGGCACAAAGGAGGCCCTTCAAGAATGCACTGATGAGTTCTTACTGGTGTCT  
 GGTAAAGGAGATGTGATTGATGACTGGTGACGGTGTGACCTCAGTGCCTTTGATGCCAGTGGGCTTCCAA  
 ATTGTAGCCCCCTTCCACAGCCGGTGTACGACTTTCTCCAACAGTGGAGCCTTCCAGCACTGTGGTTTC  
 CCTGGAGTGGGTAGATGTTCCAGCCAGCCATTGGAACCAAGTCTCTGACTATATTCTGCAGCACAAGAAA  
 GTGGATGAATACACAGACACGGACCTATACACAGGAGAATTCTGAGTTTTGCCGATGACTTACTTTCTG  
 GCCTGGGTACATCTTGTGTAGCAGCTGGTGAAGCCATGGAGAGGTTCTGAAGTCAGTATCTACTCGGT  
 GATCTTCAAGTGCCTGGAGCCAGATGGTCTTACAAGTTCACTCTGTATGCTGTGGATACTCGAGGGAGG  
 CACTCAGAGCTCAGCACAGTACTCTAAGGACAGCTTGTCCACTGGTAGATGACAACAAGCAGAAGAGA  
 TAGCGGACAAGATTTACAATCTATAAATGGTTACACAAGTGGCAAGGAGCAGCAGACTGCTTACAACAC  
 ACTGATGGAAGTCTCCGCTCCATGCTCTTCCGTGTCCAGCACCCTACAACCTCACTATGAAAAGTTT  
 GGTGACTTCGTCTGGAGGAGTGAAGGATGAGCTAGGACCAAGGAAGGCTCATCTGATTCTGCGCGGCTGG  
 AGCGGGTCAGCAGCCACTGTTCTAGTCTTTGAGAAGCGCCTACATCCAGAGTGTGTGGACACCATACC  
 CTATCTCTTGTCCGAGTGAAGGAGTCCGGCCTGCAGGAATGGTGTGGTACAGCATCTCAAAGACACC  
 AAAATCACATGTGAGGAGAAGATGGTGTCTATGGCCCCAAACACGTACGGGGAACCAAGGCCGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG223105 representing NM\_207109  
 Red=Cloning site Green=Tags(s)

```

MAAAGARRSPGRGLGLRGRPRGLGFHPGPPPPPPPLLLLFLLLLPPPLLAGATAAAASREPDSPCRLKT
VTVSTLPALRESDIGWSGARTGAAAGAGAGTGAGAGAAAAAASAPGSAGSAGTAAESRLLL FVRNELP
GRIAVQDDLNTLEPFFTLEMSGTAADISLVHWRQQWLENGTL YFHVSMSSGQLAQATAPTLQEPSEIV
EEQMHLHI SVMGGLIALLLLLLVFTVALYAQRWQKRRRIPQKSASTEATHEIHYIPSVLLGPQARESF
RSSRLQTHNSVIGVPIRETPILDDYDYEIEEPPRRANHVSREDEFSGQMTALDSLGRPGEEKVEFEKK
AAAATQETVESLMQKFKEFRANTPVEIGQLQPASRSSTSAGKRKRNRKSRGGISFGRTKGTSGEADD
ETQLTFYEQYRSRRRSKGLLSPVNTALTLIAVSSCILAMVCGNQMSCPLTVKVTLHVPEHFADGSS
FVYSEGSYLDISDWLNPAKLSLYYQINATSPWVRDL CGQRTTDACEQLCDPDTGECSCHEGYADPVVHRH
LCVRSWDWGQSEGPWYPTTLERGYDLVTGEQAPEKILRSTFSLGQGLWLPVSKSFVVPVELSINPLASCK
TDVLVTEPADVREEAMLSTYFETINDLLSSFGPVRDCSRNNGGCTRNFKCVSDRQVDSSGVCPEELKP
MKDGGSGCYDHSKIDCSDGFNGGCEQLCLQOTLPLPYDTSSTIFMFCGCVVEEYKLPADGKSCMLSDVC
EGPKCLKPDSKFNDFLFGEMLHGYNRTOHVNQGVFQMTFRENNFIKDFPQLADGLLVIPLPVEEQCRG
VLESELPDLQLLTDGIRYDEAMGYPMVQWRVRSNL YRVKLSTITLSAGFTNVLKIITKESRDELLSFI
QHYGSHYIAEALYGSELTCTIHFPSKVVQQQLWLQYQKETTELGSKKELKSMPTITYL SGLLTAQMLSD
QLISGVEIRCEEKGRCPSTCHLCRRPGKEQLSPTPVLL E INRVVPLYTLIQDNGTKEAFKNALMSSYWCS
GKGDVIDDWCRCDL SADFASGLPNCSPLPQPVLR L SPTVEPSSTVVSLEWVDVQPAIGTKVSDYI LQHKK
VDEYTDLDL YTG EFLSFADDLLSGLGTSCVAAGRSHGEVPEVSIYSVIFKCLEPDGLYKFTLYAVDTRGR
HSELSTVTLRTACPLVDDNKAEEIADKIYNLYNGYTS GKEQQTAYNTLMEVSASMLFRVQHHYNSHYEKF
GDFVWRSEDELGPRKAHLILRRLERVSSHCSLLRSAYIQSRVDTIPYLCRSEEV RPAGMVWYSILKDT
KITCEEKVMVSMARNTYGETKGR
  
```

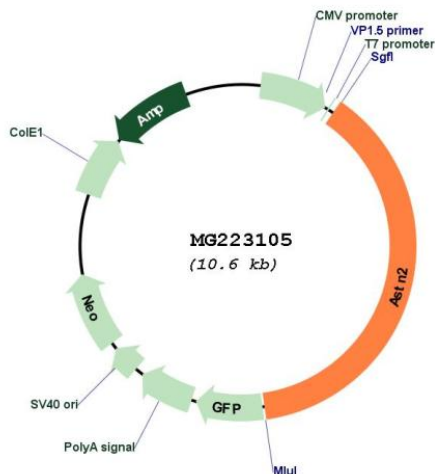
TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_207109

**ORF Size:** 4056 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\\_207109.2](#), [NP\\_996992.1](#)

**RefSeq Size:** 4831 bp

**RefSeq ORF:** 4059 bp

**Locus ID:** 56079

**UniProt ID:** [Q80Z10](#)

**Cytogenetics:** 4 C1

**Gene Summary:**

Mediates recycling of the neuronal cell adhesion molecule ASTN1 to the anterior pole of the cell membrane in migrating neurons. Promotes ASTN1 internalization and intracellular transport of endocytosed ASTN1 (PubMed:20573900). Selectively binds inositol-4,5-bisphosphate, inositol-3,4,5-trisphosphate and inositol-1,3,4,5-tetrakisphosphate, suggesting it is recruited to membranes that contain lipids with a phosphoinositide headgroup (By similarity).[UniProtKB/Swiss-Prot Function]