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Product datasheet for MG227072

Ascl1 (NM_008553) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ascl1 (NM_008553) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ascl1
Synonyms:	AI225900; ASH1; bHLHa46; Mash1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG227072 representing NM_008553
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGAGCTCTGGCAAGATGGAGAGTGGAGCCGGCCAGCAGCCGCAGCCCCCGCAGCCCTTCCTGCCTC
CCGCAGCCTGCTTCTTTGCGACCGCGGCGGCGGCGGCAGCGGCGGCGGCCGCGGCAGCTCAGAGCGCGCA
GCAGCAACAGCCGCAGGCGCCGCCGCAGCAGGCGCCGCAGCTGAGCCCGGTGGCCGACAGCCAGCCCTCA
GGGGGCGGTCACAAGTCAGCGGCCAAGCAGGTCAAGCGCCAGCGCTCGTCCTCTCCGGAACTGATGCGCT
GCAAACGCCGGCTCAACTTCAGCGGCTTCGGCTACAGCCTGCCACAGCAGCAGCCGGCCGCCGTGGCGCG
CCGCAACGAGCGCGAGCGCAACCGGGTCAAGTTGGTCAACCTGGGTTTTGCCACCCTCCGGGAGCATGTC
CCCAACGGCGCGGCCAACAAGAAGATGAGCAAGGTGGAGACGCTGCGCTCGGCGGTCGAGTACATCCGCG
CGCTGCAGCAGCTGCTGGACGAGCACGACGCGGTGAGCGCTGCCTTTCAGGCGGGCGTCCTGTCGCCCAC
CATCTCCCCCAACTACTCCAACGACTTGAACTCTATGGCGGGTTCTCCGGTCTCGTCCTACTCCTCCGAC
GAGGGATCCTACGACCCTCTTAGCCCAGAGGAACAAGAGCTGCTGGACTTTACCAACTGGTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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Protein Sequence:

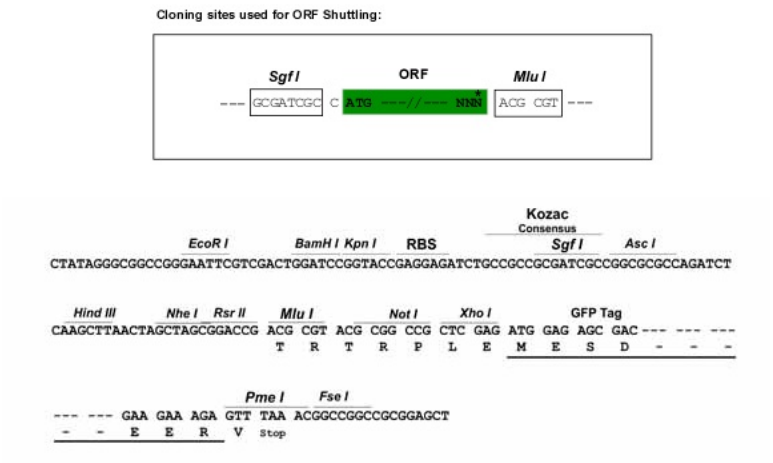
>MG227072 representing NM_008553
Red=Cloning site Green=Tags(s)

MESSGKMESGAGQQPQPPQPFLPPAACFFATAAAAAAAAAAAAQSAQQQQPQAPPQQAPQLSPVADSQPS
GGGHKSAAKQVKRQRSSSPELMRCKRRLNFSGFGYSLPQQQPAAVARRNERERNRVKLVNLGFATLREHV
PNGAANKKMSKVETLRSAVEYIRALQQLLDEHDAVSAAFQAGVLSPTISPNYSNDLNSMAGSPVSSYSSD
EGSYDPLSPEEQELLDFTNWF

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_008553

ORF Size: 693 bp

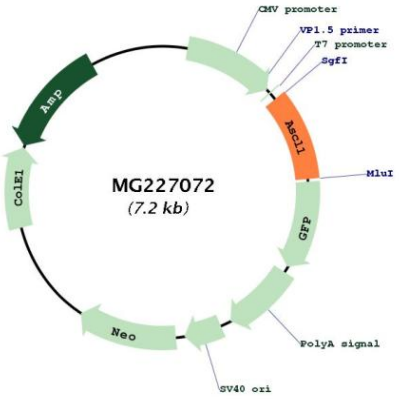
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_008553.5
RefSeq Size:	2259 bp
RefSeq ORF:	696 bp
Locus ID:	17172
UniProt ID:	Q02067
Cytogenetics:	10 C1
Gene Summary:	Transcription factor that plays a key role in neuronal differentiation: acts as a pioneer transcription factor, accessing closed chromatin to allow other factors to bind and activate neural pathways (PubMed:24243019). Directly binds the E box motif (5'-CANNTG-3') on promoters and promotes transcription of neuronal genes (PubMed:20107439, PubMed:24243019, PubMed:27281220). The combination of three transcription factors, ASCL1, POU3F2/BRN2 and MYT1L, is sufficient to reprogram fibroblasts and other somatic cells into induced neuronal (iN) cells in vitro (PubMed:20107439, PubMed:24243019, PubMed:27281220). Plays a role at early stages of development of specific neural lineages in most regions of the CNS, and of several lineages in the PNS (PubMed:8217843). Essential for the generation of olfactory and autonomic neurons (PubMed:8221886). Acts synergistically with FOXN4 to specify the identity of V2b neurons rather than V2a from bipotential p2 progenitors during spinal cord neurogenesis, probably through DLL4-NOTCH signaling activation (PubMed:16020526, PubMed:17728344).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG227072