Product datasheet for MR227072L4

Ascl1 (NM_008553) Mouse Tagged Lenti ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ascl1 (NM_008553) Mouse Tagged Lenti ORF Clone
Tag:	mGFP
Symbol:	Ascl1
Synonyms:	AI225900; ASH1; bHLHa46; Mash1
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
E. coli Selection:	Chloramphenicol (34 ug/mL)
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR227072).
Restriction Sites:	SgfI-MluI
Cloning Scheme:	

Cloning sites used for ORF Shuttling:

Sgf I   ORF   *Mlu I*

--- GCG ATC GC C ATG ---//--- NNÑ ACG CGT ---

Kozak Consensus

EcoR I   *BamH I*   *RBS*   *Sgf I*   ORF

CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGC C ATG --- --- ---

Mlu I   *Not I*   *Xho I*   mGFP Tag

--- --- --- --- --- --- NNÑ ACG CGT ACG CGG CCG CTC GAG ATG AGC GGG GGC --- --- --- ---
              T   R   T   R   P   L   E   M   S   G   G   -   -   -   -

--- --- GGA CTC AGA GTT TGG GTA GGA AGC
  -   -   G   L   R   V

* The last codon before the Stop codon of the ORF.

ACCN:	NM_008553
ORF Size:	693 bp

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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_008553.4
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:
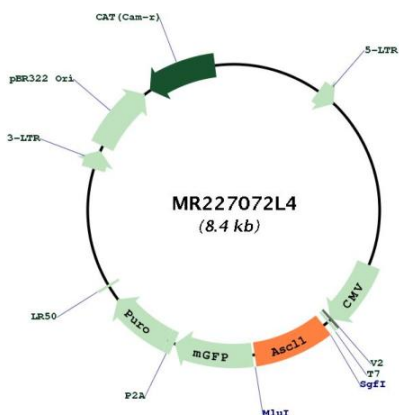
Circular map for MR227072L4
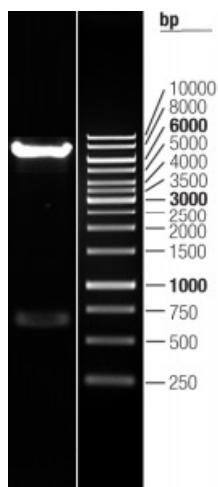
Double digestion of MR227072L4 using SgfI and MluI