

Product datasheet for SC114711

Arg 3.1 (ARC) (NM_015193) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arg 3.1 (ARC) (NM_015193) Human Untagged Clone
Tag:	Tag Free
Symbol:	Arg 3.1
Synonyms:	Arg3.1; hArc
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC114711 sequence for NM_015193 edited (data generated by NextGen Sequencing)

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ATGGAGCTGGACCACCGGACCAGCGGGGCTCCACGCCTACCCCGGGCCGCGGGCGGG
CAGGTGGCCAAGCCCAAGTGATCCTGCAGATCGGGAAGTGCCGGGCCGAGATGCTGGAG
CACGTGCGGGCGGACGCACCGGCACCTGCTGGCCGAGGTGTCCAAGCAGGTGGAGCGCGAG
CTGAAGGGGCTGCACCGTTCGGTCGGAAGCTGGAGAGCAACCTGGACGGCTACGTGCC
ACGAGCGACTCGCAGCGCTGGAAGAAGTCCATCAAGGCCTGCCTGTGCCGCTGCCAGGAG
ACCATCGCCAACCTGGAGCGCTGGGTCAAGCGCGAGATGCACGTGTGGCGCGAGGTGTTT
TACCGCTGGAGCGCTGGGCCACCGCCTGGAGTCCACGGGCGGCAAGTACCCGGTGGG
AGCGAGTCAGCCCGCCACACCGTTTCCGTGGGCGTGGGGGTCCCAGAGCTACTGCCAC
GAGGCAGATGGCTACGACTACACCGTCAGCCCCTACGCCATCACCCCGCCCCAGCGCT
GGCGAGCTGCCCGGGCAGGAGCCCGCCGAGGCCAGCAGTACCAGCCGTGGGTCCCAGGC
GAGGACGGGCAGCCAGCCCGCGTGGACACGCAGATCTTCGAGGACCTCGAGAGTTC
CTGAGCCACCTAGAGGAGTACTTGCGGCAGGTGGGCGGCTCTGAGGAGTACTGGCTGTCC
CAGATCCAGAATCACATGAACGGGCCGCAAGAAGTGGTGGGAGTTCAAGCAGGGCTCC
GTGAAGAACTGGGTGGAGTTCAAGAAGGAGTTCCTGCAGTACAGCGAGGGCAGCGTGTCC
CGAGAGGCCATCCAGCGCGAGCTGGACCTGCCGAGAAGCAGGGCGAGCCGCTGGACCAG
TTCCTGTGGCGCAAGCGGGACCTGTACCAGACGCTCTACGTGGACGCGGACGAGGAGGAG
ATCATCCAGTACGTGGTGGCACCCCTGCAGCCCAAGCTCAAGCGTTTCTGCGCCACCCC
CTGCCCAAGACCCCTGGAGCAGCTCATCCAGAGGGGCATGGAGGTGCAGGATGACCTGGAG
CAGGCGGGCCGAGCCGGCCGCCCCACCTCCCGGTGGAGGATGAGGCGGAGACCTCACG
CCC GCCCAACAGCGAGTCCGTGGCCAGTGACCGGACCCAGCCCGAGTAG

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Clone variation with respect to NM_015193.3
489 c=>t



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_015193 unedited TATACGACTCACTATAGGCGGCCGCAATTCGCACGAGGCCTCGTGCCGAATTCGGCAGC AGGTCCCTCCGCAGCAGCCGAGCCGGACCTGCCTCCCCGGCGTGCTCCGCCGGCCCCGC CGCCGGCCCGCAGCGACAGACAGGCGCTCCCCGCAGCTCCGCACGGGACCCAGGCCGCCG GACCCAGCGCCGGACCACCGTCCGTCCGCCCGAGGAGTTTGCCGCTGCCGGAGCACC TGCGCACAGATGGAGCTGGACCACCGGACCAGCGGGGCTCCACGCCTACCCGGGGCCG CGGGCGGGCAGGTGGCCAAGCCCAACGTGATCCTGCAGATCGGGAAGTGCCGGGCCGAG ATGCTGGAGCACGTGCGGCGGACGCACCGGCACCTGCTGGCCGAGGTGTCCAAGCAGGTG GAGCGCGAGCTGAAGGGGCTGCACCGGTGCGTCCGGAAGCTGGAGAGCAACCTGGACGGC TACGTGCCACGAGCGACTCGCAGCGCTGGAAGAAGTCCATCAAGGCCTGCCTGTGCCGC TGCCAGGAGACCATCGCCAACCTGGAGCGCTGGGTCAAGCGCGAGATGCACGTGTGGCGC GAGGTGTTCTACCGCTGGAGCGCTGGGCCGACCGCTGGAGTCCACGGGCGCAAGTAC CCGGTGGCAGCGAGTACGCCGNCACACCGTNTNCGTGGGCGTGGGGGGTCCCGAGAG CTACTGCCACGAGGCAGATGGCTACGACTACACCGTNAGCCCCTACGCCATCACCCGNC CCCAGCCGCTGGCGAGCTGCCCGGGCAGGAGCCGNCAGGCCAGCAGTACCAGCCGTGG GGTCCCGCGAGGGACGGCAGNCCAGNCCCGGGCGTGGACACGAGATCTTNCNAGGAC CCTNCGAGAGNTNNTGAGCCACCTANAGGAGTACTTGCGNGCAGGTGGGCGGCTTTGTA GGAGTACTGCTGNTCCANATCCAATACATGACGGGCGCCANAAGGG</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_015193 unedited TTTGGCCGCGCCGAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTGAAGTTTCAGTGT TTTATTAACAAAATCTTACAAAAAGAGTCTGTCTCTGGGGTAAGGTGCACAGGGCCTGGA CCGACATTTAAGGCTTGTGTGTGGGCAAGGGGAGGGGTTGCCACAGCCTCATGA GGTTTCCAGGGTCTTACAGGCTCCAGGGCTTCCCAAAGCCTGTGCCAGCCTTGAGGAT TGTTATGGTTTATGTGCAAAAATAAAATCTGTGGGGCTGGCAGGGTGTGGGCTGAAGAC TTGTCAGAGTGGTCTGCAGGGCTGGTCCCCAGTGGACAAGGCAGAACGATGAACCCTGA GCCAGCACCTGCTTAGGCTGCAGACGCTAGTGGCCACCAGCACCAGGGTTCTGGTGTGCG GGGCAGGGCAGAAATGCCTGGAAGCGCCCCAGGAGCCATGGCTTCTGGGATGCTCTCCTG CAGCTGAGCTCAGGGCTGCTGGGAGGGGTAGGAGCTGTGGCCCCAGCCTTGGGGCTCAT GAAAGCCTCTGGCACAGAGGATGGCCTGGCANCNGGGCGGGGTTTCCCTGCTGGGAANGAN GCAGGGCCCGACTCCTGCTGCAGTGGCTCTGGGGACGGCCAGTTGGCGGCCAGCGGGG CGGGCTTAGTGGCNGGGCCCTGGTCTCGCGCCTGCGCTCAGGCTAANCCGGGGGTTCT GCCCTCTGGTGGACCCGACTCCCCTCTGTACCCCTTTGGGGTGGCCTTGGGACTTCCC CTTCCACCAGGAACCGCAGGGGACGGGGGGTGGGCCCAACACAATCTACACAAAC TCTCGGCGACCCACGAACCCAGGTAAGCTTCTGAACCCTGCGCGG</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_015193
Insert Size:	3000 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_015193.3](#), [NP_056008.1](#)

RefSeq Size: 2985 bp

RefSeq ORF: 1191 bp

Locus ID: 23237

UniProt ID: [Q7LC44](#)

Cytogenetics: 8q24.3

Gene Summary: Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system. ARC protein is released from neurons in extracellular vesicles that mediate the transfer of ARC mRNA into new target cells, where ARC mRNA can undergo activity-dependent translation. ARC capsids are endocytosed and are able to transfer ARC mRNA into the cytoplasm of neurons. Acts as a key regulator of synaptic plasticity: required for protein synthesis-dependent forms of long-term potentiation (LTP) and depression (LTD) and for the formation of long-term memory. Regulates synaptic plasticity by promoting endocytosis of AMPA receptors (AMPA receptors) in response to synaptic activity: this endocytic pathway maintains levels of surface AMPARs in response to chronic changes in neuronal activity through synaptic scaling, thereby contributing to neuronal homeostasis. Acts as a postsynaptic mediator of activity-dependent synapse elimination in the developing cerebellum by mediating elimination of surplus climbing fiber synapses. Accumulates at weaker synapses, probably to prevent their undesired enhancement. This suggests that ARC-containing virion-like capsids may be required to eliminate synaptic material. Required to transduce experience into long-lasting changes in visual cortex plasticity and for long-term memory (By similarity). Involved in postsynaptic trafficking and processing of amyloid-beta A4 (APP) via interaction with PSEN1 (By similarity). In addition to its role in synapses, also involved in the regulation of the immune system: specifically expressed in skin-migratory dendritic cells and regulates fast dendritic cell migration, thereby regulating T-cell activation (By similarity).[UniProtKB/Swiss-Prot Function]