

## Product datasheet for **MR208438**

### Asic1 (NM\_009597) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Asic1 (NM_009597) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Asic1
Synonyms:	Accn2; AI843610; ASIC; ASIC1a; B530003N02Rik; BNaC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208438 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAAGTGAAGACCGAGGAGGAGGTGGTGGTGTCCAGCCGGTGAAGCATCCAGGCTTTTGCCAGCA  
 GCTCCACGCTGCACGGTCTTGCCACATCTTCTCTATGAGCGGCTGTCTCTGAAGCGGGACTGTGGGC  
 CCTGTGTTTCTGGGTTTCGCTGGCCGCTCTGTGTGTGTGCACTGAGCGTGTGCACTACTACTCTCTGC  
 TACCACCAGTCAACAGCTCGACGAGGTGGTGCCTCCAGCTCACCTCCCTGCCGCTACTCTCTGCA  
 ACCTCAATGAGTTTCGCTTAGCCAAGTCTCCAAGAATGACCTGTACCATGCTGGGGAAGTGTGGCCCT  
 GCTCAACAACAGGTATGAGATACCGGACACACAGATGGCTGATGAAAAGCAGCTGGAGATATTGCAGGAC  
 AAGGCCAACTCCGTAGCTTCAAGCCCAAGCCCTCAACATGCGTGAGTTCTACGACAGAGCAGGGCATG  
 ACATTCGAGACATGCTTCTCTCGTGCCACTTCCGAGGGGAGGCCGTCAGCGCTGAAGACTCAAAGTGGT  
 CTTACGCGGTATGGGAAGTGTACACATCAACTCGGGCAAGATGGGCGGCCACGGCTGAAGACCATG  
 AAAGGTGGGACTGGCAACGGCCTGGAGATCATGCTGGACATTAGCAAGATGAATACTTGCTGTGTGGG  
 GAGAGACTGATGAGACATCGTTCGAAGCAGGCATCAAAGTGCAGATCCACAGTCAGGACGAGCCTCCTTT  
 CATCGACCAGCTGGGCTTTGGCGTGGCCCCAGGCTTCCAGACGTTTGTGTCTTGCCAGGAGCAGAGGCTC  
 ATCTACCTGCCCTCCCCCTGGGGCACCTGCAATGCTGTTACCATGGACTCGGATTTCTTCGACTCCTACA  
 GCATCACGGCCTGCCGGATTGATTGTGAAACCCGTTACCTGGTGGAAAAGTCAACTGCCGATGGTGCA  
 CATGCCAGGGGATGCCCCATACTGTACTCCGGAGCAGTACAAGGAGTGTGCAGACCCTGCCCTGGACTTC  
 CTAGTGGAGAAAGACCAGGAATACTGTGTGTGTGAGATGCCCTGCAACCTGACCCGCTACGGCAAGGAGC  
 TGTCATGGTCAAGATCCCCAGAAAGCCTCAGCCAAGTACCTGGCCAAGAAGTTCAACAATCTGAACA  
 GTACATAGGGGAGAATATTCTGGTGTGGACATTTCTTTGAAGTCTCAACTATGAGACCATCGAGCAG  
 AAGAAGGCCTATGAGATCGCAGGCTTTTGGGTGACATCGGGGGCCAGATGGGATTGTTTCATCGGGCCA  
 GCATCCTCACAGTGTGGAAGTCTTTGACTATGCCTATGAGGTCATTAAGCACCGGCTGTGTAGACGTGG  
 GAAGTGCAGAAAGGAGGCTAAGAGGAACAGCGCAGATAAGGGCGTGGCGCTCAGCCTGGATGACGTCAA  
 AGACACAATCCCTGCGAGAGCCTCCGAGGACATCCTGCCGGGATGACGTACGCTGCCAACATCCTACCTC  
 ACCATCCCCTCGAGGCAGTGTGAGGACTTTACCTGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208438 protein sequence  
 Red=Cloning site Green=Tags(s)

MELKTEEEVGGVQPVSIQAFASSTLHGLAHIFSYERLSLKRALWALCFLGSLAVLLCVCTERVQYYFC  
 YHHVTKLDEVAASQLTFPAVTLNLFNFRFSQVSKNDLYHAGELLALLNNRYEIPDTQMADEKQLEILQD  
 KANFRSFKPKPFNMREFYDRAGHDIRDMLLSCHFGEACSAEDFKVVFTRYGKCYTFNSGQDGRPRKTM  
 KGGTGNGLEIMLDIQDEYLPVWGETDETSFEAGIKVQIHSQDEPPFIDQLGFGVAPGFQTFVSCQEQL  
 IYLPSPWGTCNAVTMDSDFDSYSITACRIDCETRYLVENCNRMVHMPGDAPYCTPEQYKECADPALDF  
 LVEKDQEYCVCEMPCNLTRYGKELSMVKIPSKASAKYLAKKFNKSEQYIGENILVLDIFFEVLNYETIEQ  
 KKAYEIAGLLDIGQMGLFIGASILTVLELFDYAYEVIKHRLCRRGKCQKEAKRNSADKGVALLDQV  
 RHNPCESLRGHPAGMTYAANILPHHPARGTFEDFTC

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



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

**ACCN:** NM\_009597

**ORF Size:** 1578 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_009597.2](#)
**RefSeq Size:** 3800 bp

**RefSeq ORF:** 1581 bp

**Locus ID:** 11419

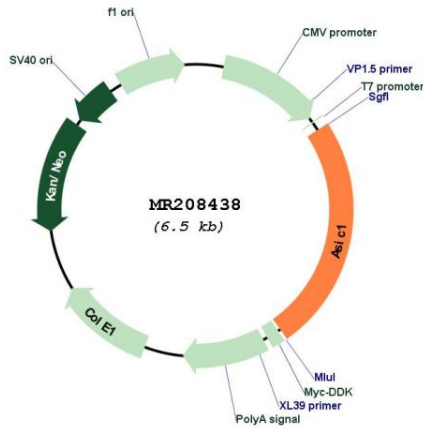
UniProt ID: [Q6NXK8](#)

Cytogenetics: 15 F1

MW: 59.7 kDa

**Gene Summary:** Proton-gated sodium channel; it is activated by a drop of the extracellular pH and then becomes rapidly desensitized. Generates a biphasic current with a fast inactivating and a slow sustained phase. Has high selectivity for sodium ions and can also transport lithium ions with high efficiency. Can also transport potassium ions, but with lower efficiency. It is nearly impermeable to the larger rubidium and cesium ions. Mediates glutamate-independent Ca(2+) entry into neurons upon acidosis. This Ca(2+) overloading is toxic for cortical neurons and may be in part responsible for ischemic brain injury. Heteromeric channel assembly seems to modulate channel properties. Functions as a postsynaptic proton receptor that influences intracellular Ca(2+) concentration and calmodulin-dependent protein kinase II phosphorylation and thereby the density of dendritic spines. Modulates activity in the circuits underlying innate fear.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR208438