

Product datasheet for **RN200435**

Aqp4 (NM_012825) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aqp4 (NM_012825) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Aqp4
Synonyms:	AQP-4; Miwc; WCH4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN200435 representing NM_012825 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGTGACGGAGCTGCAGCGAGGCGGTGGGGTAAGTGTGGACCTCCCTGCAGCAGAGAGAGCATCATGG
TGGCTTTCAAAGGCGTCTGGACTCAAGCCTTCTGGAAGGCGGTCACAGCAGAGTTCCTGGCCATGCTCAT
CTTTGTTCTGCTCAGCGTGGATCCACCATTAAGTGGGGTGGCTCAGAGAACCCCTACCTGTGGACATG
GTCCTCATCTCCCTCTGCTTTGGACTCAGCATTGCCACCATGGTTCAGTGCTTCGGCCACATCAGCGGTG
GCCACATCAACCCAGCGGTGACAGTGGCCATGGTGTGCACACGAAAGATCAGCATCGCCAAGTCCGTCTT
CTACATCACTGCGCAGTGCCTGGGGCCATCATCGGAGCTGGGATCCTCTACCTGGTCACACCCCCAGC
GTGGTGGGAGGATTGGGAGTCACCACGGTTCATGGAAACCTCACTGCTGGCCATGGGCTCCTGGTGGAGC
TAATAACTACTTTCCAGCTGGTATTACCAATTTTTGCCAGCTGTGATTCCAAACGGACTGATGTTACTGG
TTCCGTTGCTTTAGCAATTGGGTTTTCCGTTGCAATTGGACATTTGTTTGAATCAATTATACCGGAGCC
AGCATGAATCCAGCTCGATCCTTTGGCCCTGCAGTTATCATGGGAACTGGGAAAACCACTGGATATATT
GGGTTGGACCAATCATAGGCGCTGTGCTGGCAGGTGCACCTTACGAGTATGTCTTCTGCTGACGTGGA
GCTCAAACGTCGCCTAAAGGAAGCCTTCAGCAAAGCTGCACAGCAGACGAAAGGGAGCTACATGGAGGTG
GAGGACAACCGGAGCCAAGTGGAGACAGAAGACTTGATCCTGAAGCCGGGGTGGTGCATGTGATCGACA
TTGACCGTGGAGACGAGAAGAAGGGGAAGGACTCGTCTGGAGAGGTATTATCTTCTGTATGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja1563_d06.zip

Restriction Sites: SgfI-MluI



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ACCN:	NM_012825
Insert Size:	972 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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).</p>
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:	<ol style="list-style-type: none"> 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:	<u>NM_012825.3, NP_036957.1</u>
RefSeq Size:	5010 bp
RefSeq ORF:	972 bp
Locus ID:	25293
UniProt ID:	<u>P47863</u>
Cytogenetics:	18p13

Gene Summary:

This gene encodes a member of the aquaporin family of intrinsic membrane proteins that function as water-selective channels in the plasma membranes of many cells. This protein is the predominant aquaporin found in brain and has an important role in brain water homeostasis. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. A recent study provided evidence for translational readthrough in this gene and expression of an additional C-terminally extended isoform via the use of an alternative in-frame translation termination codon. [provided by RefSeq, Dec 2015]

Transcript Variant: This variant (1, also known as AQP4a) represents the predominant transcript and encodes two isoforms, which result from the use of alternative in-frame translation termination codons. The shorter isoform (M1) results from translation termination at the upstream UGA stop codon, while the longer isoform (M1x) results from UGA stop codon readthrough to the downstream UAA termination codon. This RefSeq represents the shorter isoform (M1). **Sequence Note:** The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.