

Product datasheet for RC212148

Aquaporin 4 (AQP4) (NM_004028) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aquaporin 4 (AQP4) (NM_004028) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aquaporin 4
Synonyms:	MIWC; WCH4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC212148 representing NM_004028 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTGGCTTTCAAAGGGGTCTGGACTCAAGCTTTCTGAAAGCAGTCACAGCGGAATTTCTGGCCATGC
TTATTTTTGTTCTCCTCAGCCTGGGATCCACCATCAACTGGGGTGAACAGAAAAGCCTTTACCGGTCGA
CATGGTTCTCATCTCCCTTTGCTTTGGACTCAGCATTGCAACCATGGTGCAGTCTTTGGCCATATCAGC
GGTGGCCACATCAACCCGCAGTACTGTGCCATGGTGTGACCAGGAAGATCAGCATCGCCAAGTCTG
TCTTCTACATCGCAGCCAGTGCCTGGGGCCATCATTGGAGCAGGAATCCTCTATCTGGTCACACCTCC
CAGTGTGGTGGGAGGCCCTGGGAGTACCATGGTTCATGGAAATCTTACCGCTGGTCATGGTCTCCTGGTT
GAGTTGATAATCACATTTCAATGGTGTCTACTATCTTTGCCAGCTGTGATTCCAACGGACTGATGTCA
CTGGCTCAATAGCTTTAGCAATTGGATTTCTGTTGCAATTGGACATTTATTTGCAATCAATTATACTGG
TGCCAGCATGAATCCCGCCCGATCCTTTGGACCTGCAGTTATCATGGGAAATGGGAAAACCATTGGATA
TATTGGTTGGGCCATCATAGGAGCTGCCTCGCTGGTGGCCTTATGAGTATGTCTTCTGTCCAGATG
TTGAATCAAACGTCGTTTTAAAGAAGCCTTCAGCAAAGCTGCCAGCAAACAAAAGGAAGCTACATGGA
GGTGGAGGACAACAGGAGTCAGGTAGAGACGGATGACCTGATTCTAAAACCTGGAGTGGTGCATGTGATT
GACGTTGACCGGGGAGAGGAGAAGAAGGGGAAAGACCAATCTGGAGAGGTATTGTCTTCAGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC212148 representing NM_004028
Red=Cloning site Green=Tags(s)

MVAFKGVWTQAFWKAVTAEFLAMLIFVLLSLGSTINWGGTEKPLPVDMLISLCFGLSIATMVQCFGHIS
 GGHINPAVTVAMVCTRKISIAKSVFYIAAQCLGAIIGAGILYLTPPSVVGGLGVTMVHGNLTAGHLLV
 ELIITFQLVFTIFASCDKRTDVTGSIALAIGFSVAIGHLFAINYTGASMNPARSFGPAVIMGNWENHWI
 YWVGPIIGAVLAGGLYEYVFCPDVEFKRRFKEAFSKAAQQTKGSYMEVEDNRSQVETDDLILKPGVVHVI
 DVDRGEEKKGDQSGEVLSSV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1508_a06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004028

ORF Size: 903 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_004028.4](#)

RefSeq Size: 5136 bp

RefSeq ORF: 906 bp

Locus ID: 361

UniProt ID: [P55087](#)

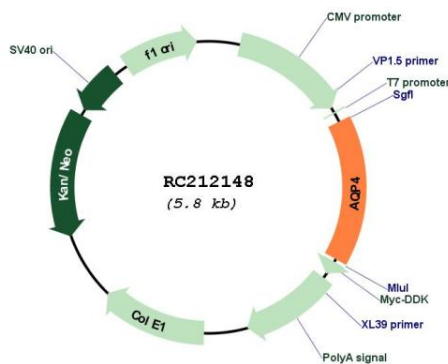
Cytogenetics: 18q11.2

Protein Families: Druggable Genome, Transmembrane

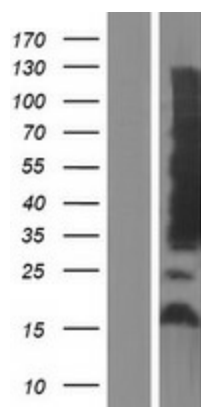
MW: 32.3 kDa

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. Additional isoforms, resulting from the use of alternative in-frame translation initiation codons, have also been described. Recent studies provided evidence for translational readthrough in this gene, and expression of C-terminally extended isoforms via the use of an alternative in-frame translation termination codon. [provided by RefSeq, Jun 2018]

Product images:



Circular map for RC212148



Western blot validation of overexpression lysate (Cat# [LY418286]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212148 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).