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Product datasheet for RC216816

Vasopressin (AVP) (NM_000490) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Vasopressin (AVP) (NM_000490) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Vasopressin
Synonyms:	ADH; ARVP; AVP-NPII; AVRP; VP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC216816 representing NM_000490
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCTGACACCATGCTGCCCGCCTGCTTCCTCGGCCTACTGGCCTTCTCCTCCGCGTGCTACTTCCAGA
ACTGCCCGAGGGGCGGCAAGAGGGCCATGTCCGACCTGGAGCTGAGACAGTGCCTCCCCTGCGGCCCCGG
GGGCAAAGGCCGCTGCTTCGGGCCCAGCATCTGCTGCGCGGACGAGCTGGGCTGCTTCGTGGGCACGGCT
GAGGCGCTGCGCTGCCAGGAGGAGAACTACCTGCCGTCGCCCTGCCAGTCCGGCCAGAAGGCGTGCGGGA
GCGGGGGCCGCTGCGCCGCCTTCGGCGTTTGCTGCAACGACGAGAGCTGCGTGACCGAGCCCGAGTGCCG
CGAGGGCTTTCACCGCCGCGCCCGCGCCAGCGACCGGAGCAACGCCACGCAGCTGGACGGGCCGGCCGGG
GCCTTGCTGCTGCGGCTGGTGCAGCTGGCCGGGGCGCCCGAGCCCTTCGAGCCCGCCCAGCCCGACGCCT
AC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216816 representing NM_000490
Red=Cloning site Green=Tags(s)

MPDTMLPACFLGLLAFSSACYFQNCPRGGKRAMSDLELRQCLPCGPGGKGRCFGPSICCADELGCFVGTA
EALRCQEENYLPSPCQSGQKACGSGGRCAAFGVCCNDESCVTEPECREGFHRRARASDRSNATQLDGPAG
ALLLRLVQLAGAPEPFEPAQPDAY

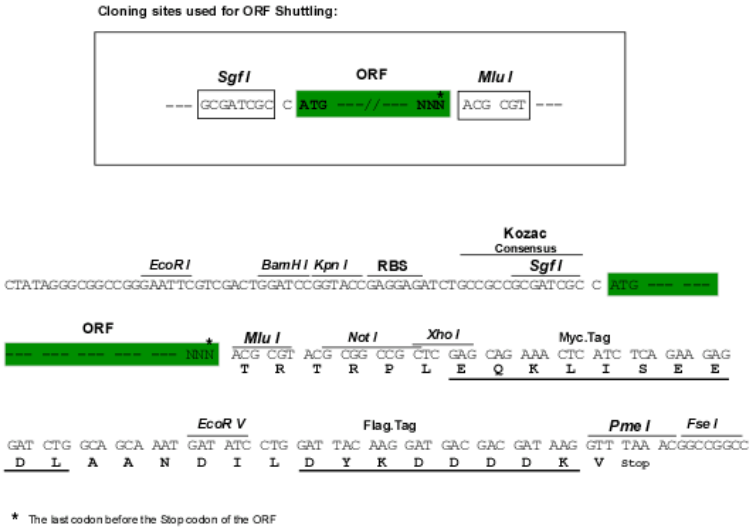
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8018_f11.zip

View online »

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000490

ORF Size: 492 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_000490.5

RefSeq Size: 633 bp

RefSeq ORF: 495 bp

Locus ID: 551

UniProt ID: P01185

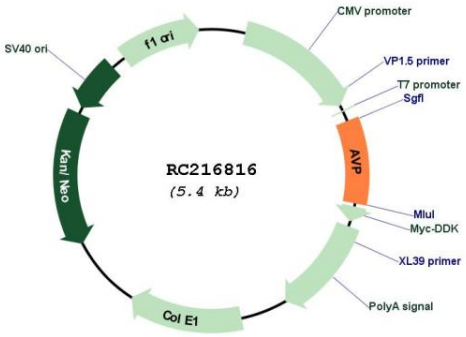
Cytogenetics: 20p13

Protein Families: Druggable Genome, Secreted Protein

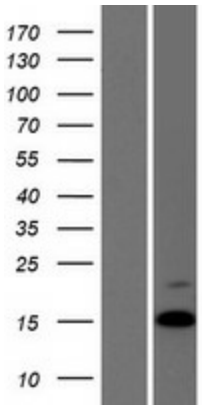
MW: 17.32 kDa

Gene Summary: This gene encodes a member of the vasopressin/oxytocin family and preproprotein that is proteolytically processed to generate multiple protein products. These products include the neuropeptide hormone arginine vasopressin, and two other peptides, neurophysin 2 and copeptin. Arginine vasopressin is a posterior pituitary hormone that is synthesized in the supraoptic nucleus and paraventricular nucleus of the hypothalamus. Along with its carrier protein, neurophysin 2, it is packaged into neurosecretory vesicles and transported axonally to the nerve endings in the neurohypophysis where it is either stored or secreted into the bloodstream. The precursor is thought to be activated while it is being transported along the axon to the posterior pituitary. Arginine vasopressin acts as a growth factor by enhancing pH regulation through acid-base transport systems. It has a direct antidiuretic action on the kidney, and also causes vasoconstriction of the peripheral vessels. This hormone can contract smooth muscle during parturition and lactation. It is also involved in cognition, tolerance, adaptation and complex sexual and maternal behaviour, as well as in the regulation of water excretion and cardiovascular functions. Mutations in this gene cause autosomal dominant neurohypophyseal diabetes insipidus (ADNDI). This gene is present in a gene cluster with the related gene oxytocin on chromosome 20. [provided by RefSeq, Nov 2015]

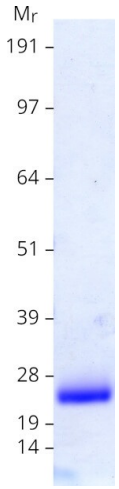
Product images:



Circular map for RC216816



Western blot validation of overexpression lysate (Cat# [LY424686]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216816 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AVP protein (Cat# [TP316816]). The protein was produced from HEK293T cells transfected with AVP cDNA clone (Cat# RC216816) using MegaTran 2.0 (Cat# [TT210002]).