

## Product datasheet for RC210914

### AVPR V2 (AVPR2) (NM\_000054) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AVPR V2 (AVPR2) (NM_000054) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AVPR2
Synonyms:	ADHR; DI1; DIR; DIR3; NDI; NDI1; V2R
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC210914 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTCATGGCGTCCACCACTTCCGCTGTGCCTGGGCATCCCTCTGCCCAGCCTGCCAGCAACAGCA  
GCCAGGAGAGGCCACTGGACACCCGGGACCCGCTGCTAGCCCGGGCGGAGCTGGCGCTGCTCTCCATAGT  
CTTTGTGGCTGTGGCCCTGAGCAATGGCCTGGTGTGCGGCCCTAGCTCGCGGGGCGGGCGGGCCAC  
TGGGCACCCATACACGTCTTCATTGGCCACTTGTGCCTGGCCGACCTGGCCGTGGCTCTGTTCCAAGTGC  
TGCCCCAGCTGGCCTGGAAGGCCACCGACCGCTTCCGTGGGCCAGATGCCCTGTGTGGGCCGTGAAGTA  
TCTGCAGATGGTGGGCATGTATGCCTCCTCCTACATGATCCTGGCCATGACGCTGGACCGCCACCGTGCC  
ATCTGCCGTCCCATGCTGGCGTACCGCCATGGAAGTGGGGCTCACTGGAACCGGCCGGTGTAGTGGCTT  
GGGCTTCTCGCTCCTTCTCAGCCTGCCCCAGCTCTTCATCTTCGCCAGCGCAACGTGGAAGGTGGCAG  
CGGGTCACTGACTGCTGGCCCTGCTTTGCGGAGCCCTGGGGCCGTCGCACCTATGTCACCTGGATTGCC  
CTGATGGTGTTCGTGGCACCTACCCTGGGATCGCCGCTGCCAGGTGCTCATCTCCGGGAGATTATG  
CCAGTCTGGTGCCAGGGCCATCAGAGAGCCCTGGGGGCGCCGAGGGGACCGCGACAGCCAGCCCGG  
TGAGGGAGCCACGTGTCAGCAGCTGTGGCCAAGACTGTGAGGATGACGCTAGTATTGGTCTGCTAT  
GTGCTGTGCTGGGCACCTTCTTCTGCTGTCAGCTGTGGCCGCGTGGGACCCGGAGGCACCTCTGGAAG  
GGGCGCCCTTTGTGCTGCTCATGTTGCTGGCCAGCCTCAACAGCTGCACCAACCCCTGGATCTATGCATC  
TTTCAGCAGCAGCGTGTCTCAGAGCTGCGAAGCTTGCTGTGCTGTGCCGGGACGCACCCACCCAGC  
CTGGGTCCCCAAGATGAGTCTGCACCACCGCCAGCTCCTCCCTGGCCAAGGACACTTCATCG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



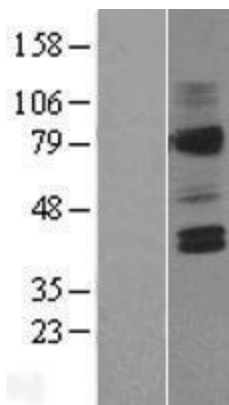
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ACCN:	NM_000054
ORF Size:	1113 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring 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. <a href="#">More info</a>
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:	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
RefSeq:	<a href="#">NM_000054.6</a>
RefSeq Size:	1682 bp
RefSeq ORF:	1116 bp
Locus ID:	554
UniProt ID:	<a href="#">P30518</a>
Cytogenetics:	Xq28
Protein Families:	Druggable Genome, GPCR, Transmembrane
Protein Pathways:	Neuroactive ligand-receptor interaction
MW:	40.3 kDa

**Gene Summary:**

This gene encodes the vasopressin receptor, type 2, also known as the V2 receptor, which belongs to the seven-transmembrane-domain G protein-coupled receptor (GPCR) superfamily, and couples to Gs thus stimulating adenylate cyclase. The subfamily that includes the V2 receptor, the V1a and V1b vasopressin receptors, the oxytocin receptor, and isotocin and mesotocin receptors in non-mammals, is well conserved, though several members signal via other G proteins. All bind similar cyclic nonapeptide hormones. The V2 receptor is expressed in the kidney tubule, predominantly in the distal convoluted tubule and collecting ducts, where its primary property is to respond to the pituitary hormone arginine vasopressin (AVP) by stimulating mechanisms that concentrate the urine and maintain water homeostasis in the organism. When the function of this gene is lost, the disease Nephrogenic Diabetes Insipidus (NDI) results. The V2 receptor is also expressed outside the kidney although its tissue localization is uncertain. When these 'extrarenal receptors' are stimulated by infusion of a V2 selective agonist (dDAVP), a variety of clotting factors are released into the bloodstream. The physiologic importance of this property is not known - its absence does not appear to be detrimental in NDI patients. The gene expression has also been described in fetal lung tissue and lung cancer associated with alternative splicing. [provided by RefSeq, Jul 2008]

**Product images:**

Western blot validation of overexpression lysate (Cat# [LY400013]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210914 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).