

## Product datasheet for **RG221342**

### **VMAT2 (SLC18A2) (NM\_003054) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	VMAT2 (SLC18A2) (NM_003054) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	VMAT2
Synonyms:	PKDYS2; SVAT; SVMT; VAT2; VMAT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG221342 representing NM\_003054  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCCTGAGCGAGCTGGCGCTGGTCCGCTGGCTGCAGGAGAGCCGCCGCTCGCGGAAGCTCATCCTGT  
 TCATCGTGTCTCTGGCGCTGCTGCTGGACAACATGCTGCTCACTGTCGTGGTCCCATCATCCCAAGTTA  
 TCTGTACAGCATTAAAGCATGAGAAGAATGCTACAGAAATCCAGACGGCCAGGCCAGTGCACACTGCCTCC  
 ATCTCAGACAGCTTCCAGAGCATCTTCTCTATTATGATAACTCGACTATGGTCACCGGGAATGCTACCA  
 GAGACCTGACACTTCATCAGACCGCCACACAGCACATGGTGACCAACGCGTCCGCTGTTCTTCCGACTG  
 TCCAGTGAAGACAAAGACCTCCTGAATGAAAACGTGCAAGTTGGTCTGTTGTTTGCCTCGAAAGCCACC  
 GTCCAGCTCATACCAACCCTTTCATAGGACTACTGACCAACAGAATTGGCTATCCAATTCATATTTG  
 CGGGATTCTGCATCATGTTTGTCTCAACAATTATGTTTGCCTTCCAGCAGCTATGCCTCCTGCTGAT  
 TGCCAGGTCGCTGAGGGCATCGGCTCGTCTGCTCTGTGGTGGGATGGGCATGCTTGCCAGTGTG  
 TACACAGATGATGAAGAGAGAGGCAACGTCATGGGAATCGCCTTGGGAGGCTGGCCATGGGGGTCTTAG  
 TGGGCCCCCTTCGGGAGTGTGCTCTATGAGTTTGTGGGGAAGACGGCTCCGTTCTGGTGTGCGCCG  
 CCTGGTACTCTTGGATGGAGCTATTCAGCTCTTGTGCTCCAGCCGTCGCCGGTGCAGCCAGAGAGTCA  
 AAGGGACACCCCTAACCACGCTGCTGAAGGACCCGTACATCCTCATTGCTGCAGGCTCCATCTGCTTTG  
 CAAACATGGGCATCGCCATGCTGGAGCCAGCCCTGCCATCTGGATGATGGAGACCATGTGTTCCCGAAA  
 GTGGCAGCTGGCGTTGCCTTCTGCCAGCTAGTATCTTATCTCATTGGAACCAATATTTTTGGGATA  
 CTTGCACACAAAAATGGGAGGTGGCTTTGTGCTCTTCTGGGAATGATAATTGTTGGAGTCAGCATTTTAT  
 GTATTCATTTGCAAAAAACATTTATGGACTCATAGCTCCGAACTTGGAGTTGGTTTTGCAATTTGGAAT  
 GGTGGATTCTGCAATGATGCCTATCATGGGCTACCTCGTAGACCTGCGGCACGTGTCCTCTATGGGAGT  
 GTGACGCCATTGCGGATGTGGCATTGTATGGGGTATGCTATAGGTCCTTCTGCTGGTGGTGTGCTATTG  
 CAAAGGCAATTGGATTTCCATGGCTCATGACAATTATTGGGATAATTGATATTCTTTTTGCCCTCTCTG  
 CTTTTTCTTGAAGTCCACCTGCCAAAGAAGAAAAATGGCTATTCTCATGGATCACAACCTGCCCTATT  
 AAAACAAAAATGTACACTCAGAATAATCCAGTCATATCCGATAGGTGAAGATGAAGAATCTGAAAGTG  
 AC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

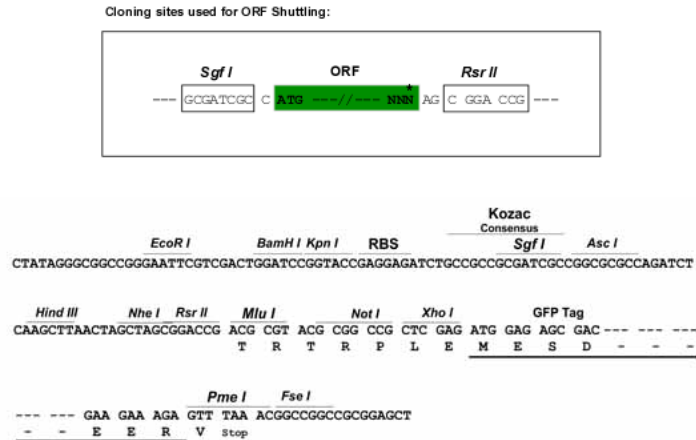
>RG221342 representing NM\_003054  
 Red=Cloning site Green=Tags(s)

MALSELALVRWLQESRRSRKLIIFIVFLALLLDNMLLTVVPIIPSYLYSIKHEKNATEIQTARPVHTAS  
 ISDSFQSIFFSYDNSTMVTGNATRDLLHQTATQHMVTNASAVPSDCPSEDKDLLNENVQVGLLFASKAT  
 VQLITNPFIGLLTNRIGYPIPIFAGFCIMFVSTIMFAFSSSYAFLLIARSLQIGSSCSSVAGMGLASV  
 YTDDEERGNVMGIALGGLAMGVLVGPFFGSVLYEYVFGKTAFLVLAALVLLDGAIQFLVLPQSRVQESQ  
 KGTPLTLLKDPYILIAAGSICFANMGIAMLEPALPIWMMETMCSRKWLGVAFLPASISYLIQTNIFGI  
 LAHKMGRWLCALLGMIIIVGVSILCIPFAKNIYGLIAPNFGVGFVIGMVDSSMMPIMGYLVDLRHVSYYGS  
 VYAIADVAFCMGYAIGPSAGGAIKAIGFPWLMTIIGIIDILFAPLCFFLRSPPAKEEKMAILMDHNCPI  
 KTKMYTQNNIQSYPIGEDEESES

SGP**TRRRLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**


**ACCN:** NM\_003054

**ORF Size:** 1542 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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).

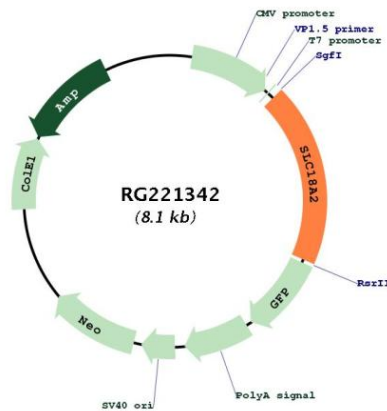
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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\\_003054.6](#)

RefSeq Size: 1898 bp  
 RefSeq ORF: 1545 bp  
 Locus ID: 6571  
 UniProt ID: [Q05940](#)  
 Cytogenetics: 10q25.3  
 Protein Families: Transmembrane  
 Protein Pathways: Parkinson's disease  
 Gene Summary:

This gene encodes an transmembrane protein that functions as an ATP-dependent transporter of monoamines, such as dopamine, norepinephrine, serotonin, and histamine. This protein transports amine neurotransmitters into synaptic vesicles. Polymorphisms in this gene may be associated with schizophrenia, bipolar disorder, and other neurological/psychiatric ailments. [provided by RefSeq, Jun 2018]

**Product images:**



Circular map for RG221342