

Product datasheet for **RC221342**

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:	Myc-DDK
Symbol:	VMAT2
Synonyms:	PKDYS2; SVAT; SVMT; VAT2; VMAT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC221342 representing NM_003054
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCCTGAGCGAGCTGGCGCTGGTCCGCTGGCTGCAGGAGAGCCGCCGCTCGCGGAAGCTCATCCTGT
 TCATCGTGTCTCTGGCGCTGCTGCTGGACAACATGCTGCTCACTGTCGTGGTCCCATCATCCCAAGTTA
 TCTGTACAGCATTAAGCATGAGAAGAATGCTACAGAAATCCAGACGCCAGGCCAGTGCACACTGCCTCC
 ATCTCAGACAGCTTCCAGAGCATCTTCTCTATTATGATAACTCGACTATGGTCACCGGGAATGCTACCA
 GAGACCTGACACTTATCAGACCGCCACACAGCACATGGTGACCAACGCGTCCGCTGTTCTTCCGACTG
 TCCAGTGAAGACAAAGACCTCCTGAATGAAAACGTGCAAGTTGGTCTGTTGTTTGCCTCGAAAGCCACC
 GTCCAGCTCATACCAACCCCTTTCATAGGACTACTGACCAACAGAATTGGCTATCCAATTCATATTTG
 CGGGATTCTGCATCATGTTTGTCTCAACAATTATGTTTGCCTTCCAGCAGCTATGCCTCCTGCTGAT
 TGCCAGGTCGCTGAGGGCATCGGCTCGTCTGCTCTGTGGTGGGATGGGCATGCTTGCCAGTGTC
 TACACAGATGATGAAGAGAGAGGCAACGTCATGGGAATCGCCTTGGGAGGCTGGCCATGGGGTCTTAG
 TGGGCCCCCTTCGGGAGTGTGCTCTATGAGTTTGTGGGAAGACGGCTCCGTTCTGGTGTGCGCCG
 CCTGGTACTCTTGGATGGAGCTATTCAGCTCTTGTGCTCCAGCCGTCGCCGGTGCAGCCAGAGAGTCA
 AAGGGACACCCCTAACCACGCTGCTGAAGACCCGTACATCCTCATTGCTGCAGGCTCCATCTGCTTTG
 CAAACATGGGCATCGCCATGCTGGAGCCAGCCCTGCCATCTGGATGATGGAGACCATGTGTTCCCGAAA
 GTGGCAGCTGGCGTTGCCTTCTTCCAGCTAGTATCTCTTATCTCATTGGAACCAATATTTTTGGGATA
 CTTGCACACAAAAATGGGAGGTGGCTTTGTGCTCTTCTGGGAATGATAATTGTTGGAGTCAGCATTTTAT
 GTATTCATTTGCAAAAAACATTTATGGACTCATAGCTCCGAACTTTGGAGTTGGTTTTGCAATTGGAAT
 GGTGGATTTCGTCATGATGCCTATCATGGGCTACCTCGTAGACCTGCGGCACGTGTCGCTATGGGAGT
 GTGACGCCATTGCGGATGTGGCATTGTATGGGGTATGCTATAGGTCCTTCTGCTGGTGGTGTGCTATTG
 CAAAGGCAATTGGATTTCCATGGCTCATGACAATTATTGGGATAATTGATATTCTTTTTGCCCTCTCTG
 CTTTTTCTTGAAGTCCACCTGCCAAAGAAGAAAAATGGCTATTCTCATGGATCACAACCTGCCCTATT
 AAAACAAAAATGTACACTCAGAATAATATCCAGTCATATCCGATAGGTGAAGATGAAGAATCTGAAAGTG
 AC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC221342 representing NM_003054
 Red=Cloning site Green=Tags(s)

MALSELALVRWLQESRRSRKLIIFIVFLALLLDNMLLTVVVPIIPSYLYSIKHEKNATEIQTARPVHTAS
 ISDSFQSFYSDNSTMVTGNATRDLLHQTATQHMVTNASAVPDCPSEDKLLNENVQVGLLFASKAT
 VQLITNPFIFGLLTNRIGYPIPIFAGFCIMFVSTIMFAFSSSYAFLLIARSLQIGIGSSCSSVAGMGLASV
 YTDDEERGNVMGIALGGLAMGVLVGPFFGSVLYEFVGKTAFLVLAALVLLDGAIQFLVLPQSRVQESQ
 KGTPLTLLKDPYILIAAGSICFANMGIAMLEPALPIWMMETMCSRKWLGVAFLPASISYLIQTNIFGI
 LAHKMGRWLCALLGMIIIVGVSILCIPFAKNIYGLIAPNFGVGFVIGMVDSSMMPIMGYLVDLRHVSYYGS
 VYAIADVAFCMGYAIGPSAGGAIKAIKIFPWLMTIIGIIDILFAPLCFFLRSPPAKEEKMAILMDHNCPI
 KTKMYTQNNIQSYPIGEDEESES

SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6187_g03.zip

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 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_003054.6](#)

RefSeq Size: 1898 bp

RefSeq ORF: 1545 bp

Locus ID: 6571

UniProt ID: [Q05940](#)

Cytogenetics: 10q25.3

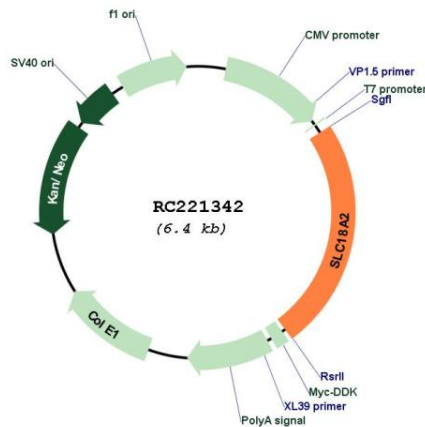
Protein Families: Transmembrane

Protein Pathways: Parkinson's disease

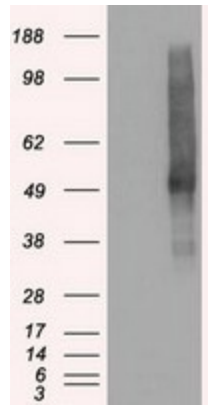
MW: 55.5 kDa

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]

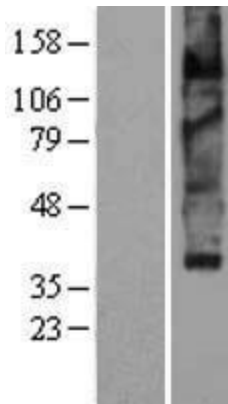
Product images:



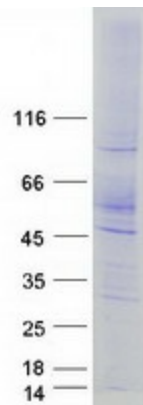
Circular map for RC221342



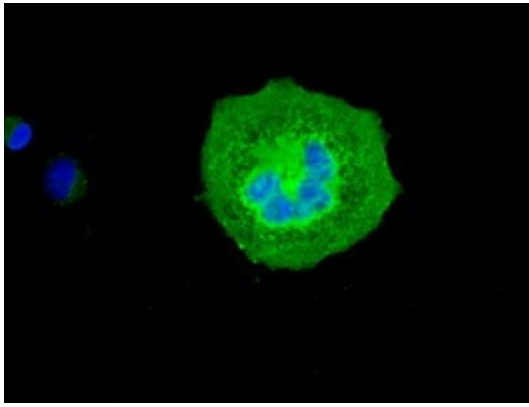
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SLC18A2 (Cat# RC221342, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SLC18A2 (Cat# [TA500506]). Positive lysates [LY401066] (100ug) and [LC401066] (20ug) can be purchased separately from OriGene.



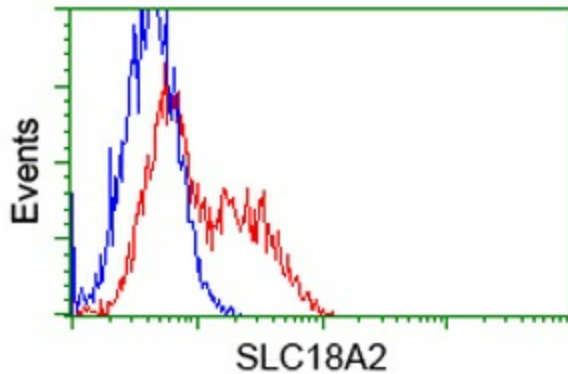
Western blot validation of overexpression lysate (Cat# [LY401066]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221342 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SLC18A2 protein (Cat# [TP321342]). The protein was produced from HEK293T cells transfected with SLC18A2 cDNA clone (Cat# RC221342) using MegaTran 2.0 (Cat# [TT210002]).



Anti-SLC18A2 mouse monoclonal antibody (TA500506) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY SLC18A2 (RC221342).



HEK293T cells transfected with either RC221342 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-SLC18A2 antibody (TA500506), and then analyzed by flow cytometry.