

Product datasheet for **RC223924**

EAAT2 (SLC1A2) (NM_004171) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	EAAT2 (SLC1A2) (NM_004171) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EAAT2
Synonyms:	DEE41; EAAT2; EIEE41; GLT-1; HBGT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC223924 representing NM_004171
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCATCTACGGAAGGTGCCAACAAATATGCCAAGCAGGTGGAAGTGCAGATGCACGACAGTCATCTTG
 GCTCAGAGGAACCCAAGCACCGGCACCTGGGCCTGCGCCTGTGTGACAAGCTGGGAAGAATCTGCTGCT
 CACCCTGACGGTGTGGTGTATCCTGGGAGCAGTGTGTGGAGGGCTTCTTCGCTTGGCATCTCCCATC
 CACCCTGATGTGGTTATGTTAATAGCCTTCCCAGGGGATATACTCATGAGGATGCTAAAAATGCTCATT
 TCCCTCTAATCATCTCCAGCTTAATCACAGGGTGTGAGGCTGGATGCTAAGGCTAGTGGCCGCTTGGG
 CACGAGAGCCATGGTGTATTACATGTCCACGACCATATTGCTGCAGTACTGGGGTCTTCTGCTTGG
 GCTATCCATCCAGGCAATCCAAGCTCAAGAAGCAGCTGGGGCCTGGGAAGAAGAATGATGAAGTGCCA
 GCCTGGATGCCTTCTGGACCTATTGAAATCTCTCCCTGAAAACCTTGCCAAGCCTGCTTTCAACA
 GATTCAAACAGTGACGAAGAAAGTCTGGTTGCACCACCGCCAGACGAGGAGGCCAACGCAACCAGCGCT
 GTTGTCTCTGTGAACGAGACTGTGACTGAGGTGCCGAGGAGACTAAGATGGTTATCAAGAAGGGCC
 TGGAGTTCAAGGATGGGATGAACGCTTAGGTCTGATAGGGTTTTTCATTGCTTTTGGCATCGCTATGGG
 GAAGATGGGAGATCAGGCCAAGCTGATGGTGGATTTCTTCAACATTTTGAATGAGATTGTAATGAAGTTA
 GTGATCATGATCATGTGGTACTCTCCCTGGGTATCGCCTGCCTGATCTGTGGAAAGATCATTGCAATCA
 AGGACTTAGAAGTGGTGGTACTAGGCAACTGGGGATGTACATGGTAACAGTGATCATAGGCCTCATCATCA
 CGGGGGCATCTTCTCCCTTGATTTACTTTGTAGTGACCAGGAAAAACCCCTTCTCTTTTTTGTCTGGC
 ATTTTCCAAGCTTGGATCACTGCCCTGGCACCCTTCCAGTGTGGAACCTTGCCTGTACACCTTTGCTT
 GCCTGGAAAGAAAATCTGGGGATTGATAAGCGTGTGACTAGATTCTGCTCTTCTGTTGGGCAACCATTA
 CATGGATGGTACAGCCCTTTATGAAGCGGTGGCCGCCATCTTTATAGCCCAAATGAATGGTGTGCTCTG
 GATGGAGGACAGATTGTGACTGTAAGCCTCACAGCCACCCTGGCAAGCGTCGGCGCGGCCAGTATCCCCA
 GTGCCGGGCTGGTACCATGCTCCTCATTCTGACAGCCGTGGGCCTGCCAACAGAGGACATCAGCCTGCT
 GGTGGCTGTGGACTGGCTGCTGGACAGGATGAGAACTTCACTCAATGTTGTGGGTGACTCTTTGGGGCT
 GGGATAGTCTATCACCTCTCAAGTCTGAGCTGGATACCATTGACTCCCAGCATCGAGTGCATGAAGATA
 TTGAAATGACCAAGACTCAATCCATTTATGATGACATGAAGAACCACAGGAAAGCAACTTAATCAATG
 TGTCTATGCTGCACAACTCTGTATAGTAGAATGAAGTAACTCTGGCAGCCAATGAAAGTCA
 GCCGACTGCAGTGTGAGGAAGAACCTTGAAACGTGAGAAA

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223924 representing NM_004171
 Red=Cloning site Green=Tags(s)

MASTEGANNMPKQVEVRMHDShLGSEEPKhrHLGLRLCDKLGKNNLLLTlVfGVILGAVCGLLRLASPI
 HPDVVMLIAfPGDILMRMLKMLILPLIISSlITGLSGLDAKASGRLGTRAMVYYMSTTIIAAVLGVILVL
 AIHPGNPKLKKQLGPGKKNDEVSSLDaFLDLIRNLFpenLVQACfQqIQTVTKKVLVAPPDEEANATSA
 VVSLlNETVTEVPEETKMVIKGLfEKDGMNVLGLIGFFIAFGIAMGKMGDQAKLMVDFFNILNEIVMKL
 VIMIMWYSPLGIAClICGKIIAIKDLfEVARQLGMYMVTVIIGLIHGGIFLPLIYfVVTRKNPFSFFAG
 IFQAWITAlGTASSAGTLpVTFrCLEENLGI DKRVTRfVLPVGATINMDGTALYEAVAAIFIAQMNGVVL
 DGGQIVTVSLTATLASVGAASIPsAGLVtMLLILTAvgLPTEDIslLVAVDWLLDRMRTSVNVVGDsfGA
 GIVYHLskSELDtIDSqHRVhEDIEMTKTQSIYDDMKNHRESNSNQCvYAAHNSVIvDECKVTLAANGKS
 ADCSVEEEPWKREK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

ACCN: NM_004171

ORF Size: 1722 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.

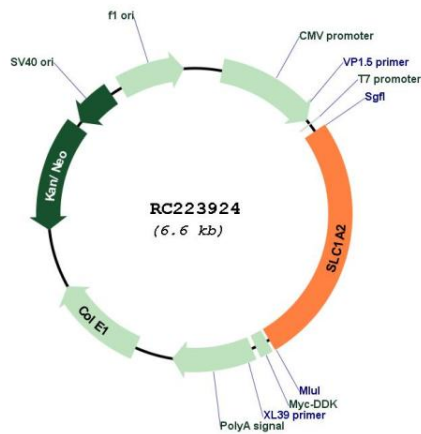
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

RefSeq: [NM_004171.2, NP_004162.2](#)
RefSeq Size: 11692 bp
RefSeq ORF: 1725 bp
Locus ID: 6506
UniProt ID: [P43004](#)
Cytogenetics: 11p13
Domains: SDF
Protein Families: Transmembrane
Protein Pathways: Amyotrophic lateral sclerosis (ALS)
MW: 61.9 kDa

Gene Summary: This gene encodes a member of a family of solute transporter proteins. The membrane-bound protein is the principal transporter that clears the excitatory neurotransmitter glutamate from the extracellular space at synapses in the central nervous system. Glutamate clearance is necessary for proper synaptic activation and to prevent neuronal damage from excessive activation of glutamate receptors. Improper regulation of this gene is thought to be associated with several neurological disorders. Alternatively spliced transcript variants of this gene have been identified. [provided by RefSeq, Jun 2017]

Product images:



Circular map for RC223924