

## Product datasheet for **RG223924**

### 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:	TurboGFP
Symbol:	EAAT2
Synonyms:	DEE41; EAAT2; EIEE41; GLT-1; HBGT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223924 representing NM\_004171  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGCATCTACGGAAGGTGCCAACAAATATGCCAAGCAGGTGGAAGTGCGAATGCACGACAGTCATCTTG  
 GCTCAGAGGAACCAAGCACCGGCACCTGGGCCTGCGCCTGTGTGACAAGCTGGGAAGAATCTGCTGCT  
 CACCCTGACGGTGTGGTGTATCCTGGGAGCAGTGTGTGGAGGGCTTCTTCGCTTGGCATCTCCCATC  
 CACCCTGATGTGGTTATGTTAATAGCCTTCCCAGGGGATATACTCATGAGGATGCTAAAAATGCTCATT  
 TCCCTCTAATCATCTCCAGCTTAATCACAGGGTGTGAGGCTGGATGCTAAGGCTAGTGGCCGCTTGGG  
 CACGAGAGCCATGGTGTATTACATGTCCACGACCATATTGCTGCAGTACTGGGGTCATTCTGGTCTTG  
 GCTATCCATCCAGGCAATCCAAGCTCAAGAAGCAGCTGGGGCCTGGGAAGAAGAATGATGAAGTGCCA  
 GCCTGGATGCCTTCTGGACCTATTGAAATCTCTCCCTGAAAACCTTGCCAAGCCTGCTTCAACA  
 GATTCAAACAGTGACGAAGAAAGTCTGGTTGCACCACCGCCAGACGAGGAGGCCAACGCAACCAGCGCT  
 GTTGTCTCTGTGAACGAGACTGTGACTGAGGTGCCGAGGAGACTAAGATGGTTATCAAGAAGGGCC  
 TGGAGTCAAGGATGGGATGAACGCTTAGGTCTGATAGGGTTTTTCATTGCTTTTGGCATCGCTATGGG  
 GAAGATGGGAGATCAGGCCAAGCTGATGGTGGATTTCTTCAACATTTTGAATGAGATTGTAATGAAGTTA  
 GTGATCATGATCATGTGGTACTCTCCCTGGGTATCGCCTGCCTGATCTGTGAAAGATCATTGCAATCA  
 AGGACTTAGAAGTGGTGGTACTAGGCAACTGGGGATGTACATGGTAACAGTGATCATAGGCCTCATCATCA  
 CGGGGGCATCTTCTCCCTTGATTTACTTTGTAGTGACCAGGAAAAACCCCTTCTCTTTTTTGTGGC  
 ATTTTCCAAGCTTGGATCACTGCCCTGGCACCCTCCAGTGTGGAACCTTGCCTGTACCTTTCTGTT  
 GCCTGGAAGAAAATCTGGGGATTGATAAGCGTGTGACTAGATTCCTCCTCTGTTGGAGCAACCTTAA  
 CATGGATGGTACAGCCCTTATGAAGCGGTGGCCGCATCTTTATAGCCCAAATGAATGGTGTGCTCTG  
 GATGGAGGACAGATTGTGACTGTAAGCCTCACAGCCACCCTGGCAAGCGTCGGCGCGCCAGTATCCCCA  
 GTGCCGGGCTGGTACCATGCTCCTCATTCTGACAGCCGTGGGCCTGCCAACAGAGGACATCAGCCTGCT  
 GGTGGCTGTGGACTGGCTGCTGGACAGGATGAGAACTTCACTCAATGTTGTGGGTGACTCTTTGGGGCT  
 GGGATAGTCTATCACCTTCCAAGTCTGAGCTGGATACCATTGACTCCCAGCATCGAGTGCATGAAGATA  
 TTGAAATGACCAAGACTCAATCCATTTATGATGACATGAAGAACCACAGGAAAGCAACTTAATCAATG  
 TGTCTATGCTGCACAACTCTGTATAGTAGAATGAAGTAACTCTGGCAGCCAATGAAAGTCA  
 GCCGACTGCAGTGTGAGGAAGAACCTTGAAACGTGAGAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG223924 representing NM\_004171  
 Red=Cloning site Green=Tags(s)

MASTEGANNMPKQVEVRMHDShLGSEEPKhrHLGLRLCDKLGKNNLLLTlVfGvILgAVCGLLRLASPI  
 HPDvVMLIAfPGDILMRMLKMLILPLIISSlITGLSGLDAKASGRLGTRAMVYYMSTTIIAAVLGVILVL  
 AIHPGNPKLKKQLGPGKKNDEVSSLDaFLDLIRNLFpenLVQACFQqIQTVTKKVLVAPPDEEANATSA  
 VVSLlNETVTEVPEETKMVIKKGLEfKdGMNVLGLIGFFIAFGIAMGMDQAKLMVDFFNILNEIVMKL  
 VIMIMWYSPLGIAClICGKIIAIKDLEvVARQLGMYMVTVIIGLIHGGIFLPLIYfVvTRKNPFSFFAG  
 IFQAWITAlGTASSAGTLpVtFRcLEENLGI DKRVTRFVLPVGATINMDGTALYeAVAAIFIAQMNGVVL  
 DGGQIVTVSLTATLASVGAASIPsAGLVtMLLILtAVGLPTEDISLLVAVDWLLDRMRTSVNvVGDsFGA  
 GIVYHLskSELDtIDSqHRVhEDIEMTKtQSIYDDMKNHRESNSnQCVyAAHNSVIVDECKVTLANGKS  
 ADCSVEEEPWKREK

TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**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](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](#)

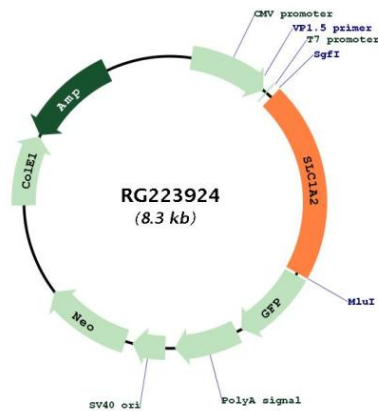
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_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)  
**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 RG223924