

# Recombinant Mouse EAA3 Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51463

Size: 10ug, 100ug

Protein Name: Excitatory amino acid transporter 3 (Excitatory amino-acid carrier 1) (Sodium-dependent glutamate/aspartate transporter 3) (Solute carrier family 1 member 1)

Synonym: Slc1a1, Eaac1, Eaat3

UniProt ID: P51906

UniProt Link: [www.uniprot.org/uniprotkb/P51906/entry](http://www.uniprot.org/uniprotkb/P51906/entry)

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 523 AA

Molecular Weight: 57 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MGKPTSSGCDWRRFLRNHWLLSTVAAVVLGIVLGVVVRGHSELSNLDKFYFAFPGEILMRMLKLVI  
LPLIVSSMITGVAALDSNVSGKIGLRVYYFSTTVIAVILGIVLVVSIKPGVTQKVNDINRTGKTPEVST  
MDAMLDLIRNMFPENLVQACFQQYKTKREEVKPVGDPGGNATEVSVTTAMTTMSENKTKEYKIVGL  
YSDGINVLGLIIFCLVFGLVIGKMGEKGQILVDFFNALSDATMKIVQIIMCYPGILFLIAGKII EVEDWEI  
FRKLGLYMATVLSGLAIHSLIVLPLLYFIVVRKNPFRFALGMAQALLTALMISSSSATLPVTFRCAEEN  
QVDKRITRFVLPVGATINMDGTALYEAAVAFIAQLNGLDLSIGQIVTISITATAASIGAAGVPQAGLVT  
MVIVLSAVGLPAEDVTLLIAVDWLLDRFRTMVNVLGDAFGTGIVEKLSKKELEQMDVSSEVNIVNPFAL  
EPTTLDNEDSDTKKSYVNGGFAVDKSDTISFTQTSQF

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Excitatory amino acid transporter 3 (Excitatory amino-acid carrier 1) (Sodium-dependent glutamate/aspartate transporter 3) (Solute carrier family 1 member 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Sodium-dependent, high-affinity amino acid transporter that mediates the uptake of L-glutamate and also L-aspartate and D-aspartate (PubMed:12119102, PubMed:18684713). Can also transport L-cysteine (PubMed:30840898). Functions as a symporter that transports one amino acid molecule together with two or three Na(+) ions and one proton, in parallel with the counter-transport of one K(+) ion. Mediates Cl(-) flux that is not coupled to amino acid transport; this avoids the accumulation of negative charges due to aspartate and Na(+) symport (By similarity). Plays an important role in L-glutamate and L-aspartate reabsorption in renal tubuli (PubMed:9233792). Plays a redundant role in the rapid removal of released glutamate from the synaptic cleft, which is essential for terminating the postsynaptic action of glutamate (PubMed:9233792). Contributes to glutathione biosynthesis and protection against oxidative stress via its role in L-glutamate and L-cysteine transport (PubMed:30840898). Negatively regulated by ARL6IP5 (PubMed:12119102).

**Subcellular Localization:** Cell membrane ; Multi-pass membrane protein . Apical cell membrane ; Multi-pass membrane protein . Synapse, synaptosome . Early endosome membrane . Late endosome membrane . Recycling endosome membrane .

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer- composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.