

Datasheet for 600-101-MN3S**Eaat2 Antibody****Overview**

Description:	Anti-Eaat2 (GOAT) Antibody - 600-101-MN3S
Item No.:	600-101-MN3S
Size:	25 µL
Applications:	IF, WB
Reactivity:	Mouse, Rat
Host Species:	Goat

Product Details

Background:	SLC1A2 (Solute Carrier Family 1 Member 2), glutamate transporters, also known as excitatory amino acid transporters (EAATs), are sodium- and potassium- dependent members of the solute carrier family 6 (SLC1), widely distributed throughout the brain. These sodium-dependent, high-affinity amino acid transporter mediates the uptake of L-glutamate, L-aspartate, and D-aspartate functioning 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. It mediates the Cl (-) flux that is not coupled to amino acid transport avoiding the accumulation of negative charges due to aspartate and Na (+) symport. Eaat2 is essential for the rapid removal of released glutamate from the synaptic cleft, and for terminating the postsynaptic action of glutamate. Improper regulation of this gene is thought to be associated with several neurological disorders including Epileptic Encephalopathy, Early Infantile, 41 and Undetermined Early-Onset Epileptic Encephalopathy. Anti-Eaat2 Antibody is useful for researchers interested in transmembrane transporter activity, neuroscience research, and cell metabolism.
Synonyms:	Goat Anti-Eaat2 Antibody, Goat Anti-Excitotoxic Amino Acid Transporter Antibody, Solute Carrier Family 1 Member 2, Solute Carrier Family 1 (Glial High Affinity Glutamate Transporter) Member 2, Sodium-Dependent Glutamate/Aspartate Transporter 2, Toxicitatory Amino Acid Transporter, Glutamate/Aspartate Transporter II, EAAT2, Excitotoxic Amino Acid Transporter, EIEE41, GLT-1, HBGT, GLT1
Host Species:	Goat
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Slc1a2
Reactivity:	Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Eaat2 Antibody was prepared from whole goat serum produced by repeated immunizations with a synthetic peptide corresponding to the N-terminal region of Rat Eaat2 surrounding aa1-25 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against rat Eaat2. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to human, mouse, and rat.
Relevant Links:	• UniProtKB - P31596 • NCBI - NP_001289018.1 • GeneID - 29482

Application Details

Tested Applications:	IF, WB
Application Note:	Anti-Eaat2 Antibody has been tested in WB and IF. Expect a band at ~62kDa in western blot using appropriate tissues and lysates. Positive control used: rat and mouse brain lysates in western blot and Rat Pups Brain heterogenous cells in immunofluorescence.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
IF:	15 µg/ml
WB:	1:200

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.05 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.01% (w/v) Sodium Azide

Stabilizer: None

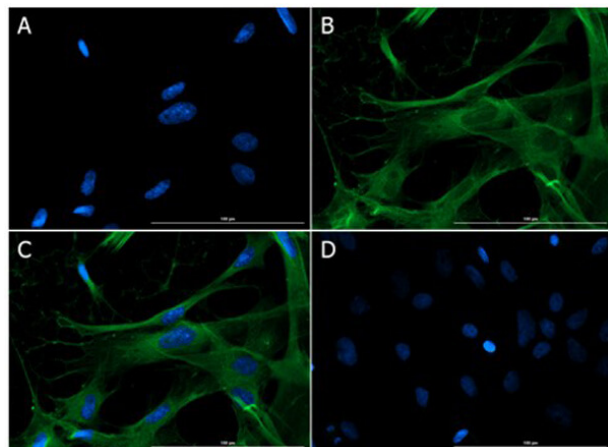
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

Expiration: Expiration date is one (1) year from date of receipt.

Images

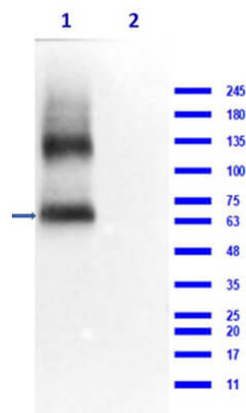


Immunofluorescence Microscopy

Immunofluorescence of Goat Anti-Eaat2 Antibody. Cells: Rat Pups Brain heterogenous cells. Fixation: 4% PFA.

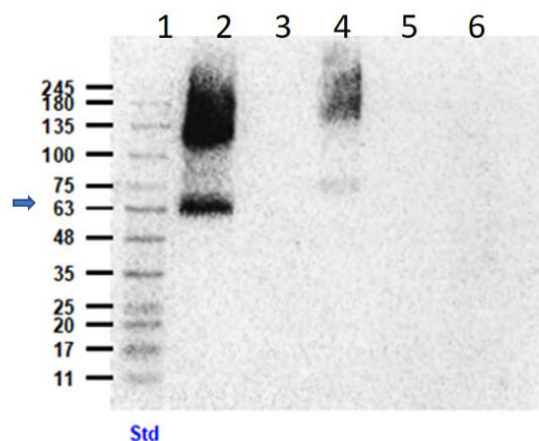
Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Eaat2 at 15µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Goat IgG DyLight™488 (p/n 605-741-125) at 5µg/mL for 60mins at RT. Nuclear Counterstain: DAPI.

Staining: (A) DAPI, (B) anti-Eaat2 and secondary, (C) merge A +B, (D) secondary only. Expected localization: plasma membrane >> extracellular > mitochondria, nucleus.



Western Blot

Western Blot of Goat anti-Eaat2 Antibody. Lane 1: Rat Brain Lysate (p/n W12-000-T077) (35ug) [+]. Lane 2: HEK293T whole cell lysate (35ug) [-]. Primary Antibody: anti-Eaat2 at 5µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Goat IgG HRP (p/n 705-703-125) at 1:40,000 for 60mins at RT. Block: 5% BLOTTO (p/n B501-0500). Predicted MW: 62kDa. Observed MW: ~65, 130 kDa. Dimerization expected, with glycosylations and lipidations.



Western Blot

Western Blot of Goat anti-Eaat2 Antibody. Lane 1: Opal Pre-stained Molecular Weight Marker (p/n MB-210-0500). Lane 2: Rat Brain Lysate (p/n W12-000-T077)(35ug) [+]. Lane 3: Rat Liver Lysate (p/n W12-000-T093)(35ug) [-]. Lane 4: Mouse Brain Lysate (p/n W10-000-T004)(35ug) [+]. Lane 5: Mouse Liver Lysate (p/n W10-000-T020)(35ug) [-]. Lane 6: NIH/3T3 Whole Cell Lysate (p/n W10-003-371). Load: 35µg/lane. Primary Antibody: anti-Eaat2 at 1:1000 overnight at 2-8°C. Secondary Antibody: Donkey Anti-Goat IgG HRP (p/n 705-703-125) at 1:40,000 for 60mins at RT. Block: BlockOut Buffer (p/n MB-073). Predicted MW: 62kDa. Observed MW: ~65, 130 kDa. Dimerization expected, with glycosylations and lipidations.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.