abcam

Product datasheet

Anti-EAAT1 antibody [EPR12686] ab181036

Recombinant RabMAb

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Overview

Product name	Anti-EAAT1 antibody [EPR12686]
Description	Rabbit monoclonal [EPR12686] to EAAT1
Host species	Rabbit
Specificity	Unsuitable for human ICC/IF.
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Monkey
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse brain, rat brain and human cerebellum lysates. IHC-P: Human , Mouse and Rat cerebral cortex tissue sections. ICC/IF: Mouse and rat primary neural / glia cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR12686

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab181036 in the following tested applications.

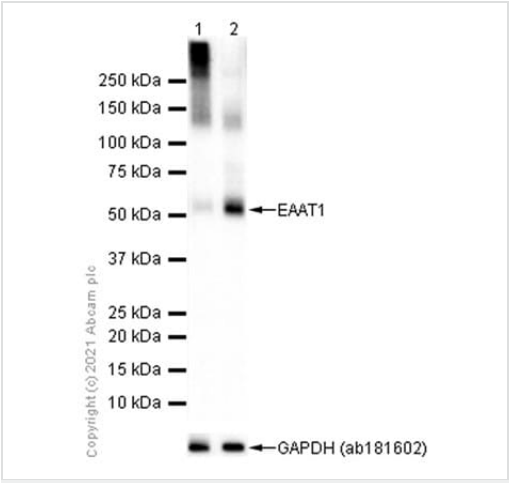
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/50 - 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		1/1000 - 1/10000. Predicted molecular weight: 59 kDa.
ICC/IF		1/50.

Target

Function	Transports L-glutamate and also L- and D-aspartate. Essential for terminating the postsynaptic action of glutamate by rapidly removing released glutamate from the synaptic cleft. Acts as a symport by cotransporting sodium.
Tissue specificity	Highly expressed in cerebellum, but also found in frontal cortex, hippocampus and basal ganglia.
Involvement in disease	Defects in SLC1A3 are the cause of episodic ataxia type 6 (EA6) [MIM:612656]. EA6 is characterized by episodic ataxia, seizures, migraine and alternating hemiplegia.
Sequence similarities	Belongs to the sodium:dicarboxylate (SDF) symporter (TC 2.A.23) family. SLC1A3 subfamily.
Post-translational modifications	Glycosylated.
Cellular localization	Membrane.

Images



Western blot - Anti-EAAT1 antibody [EPR12686] (ab181036)

All lanes : Anti-EAAT1 antibody [EPR12686] (ab181036) at 1/5000 dilution

Lane 1 : Mouse brain lysate boiled
Lane 2 : Mouse brain lysate unboiled

Lysates/proteins at 15 µg per lane.

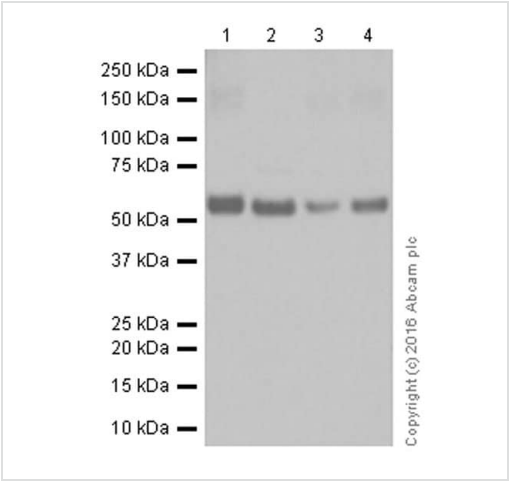
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 59 kDa

Exposure time: 10 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

We recommend not to boil the samples after lysis to get desired WB results.



Western blot - Anti-EAAT1 antibody [EPR12686] (ab181036)

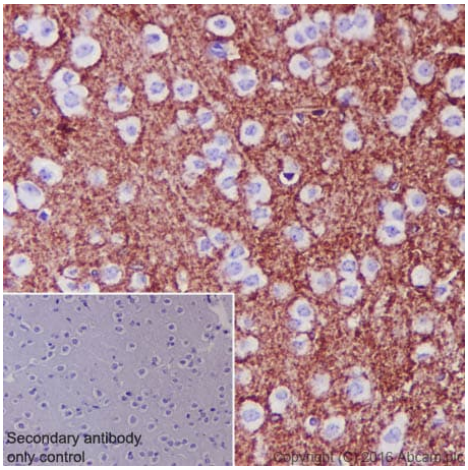
All lanes : Anti-EAAT1 antibody [EPR12686] (ab181036) at 1/5000 dilution

Lane 1 : Mouse brain
Lane 2 : Mouse hippocampus
Lane 3 : Rat hippocampus
Lane 4 : Rat brain

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

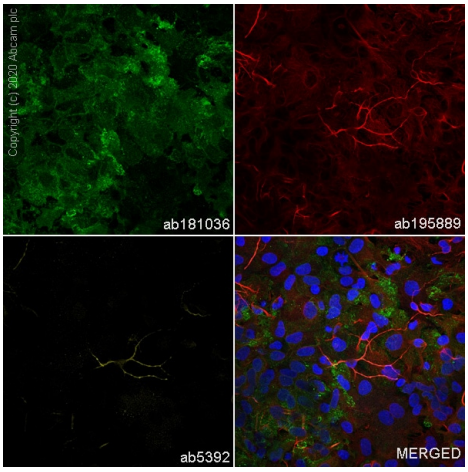
Predicted band size: 59 kDa
Additional bands at: 59 kDa. We are unsure as to the identity of these extra bands.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EAAT1 antibody [EPR12686] (ab181036)

ab181036 staining EAAT1 in mouse cerebral cortex tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at 1/500.

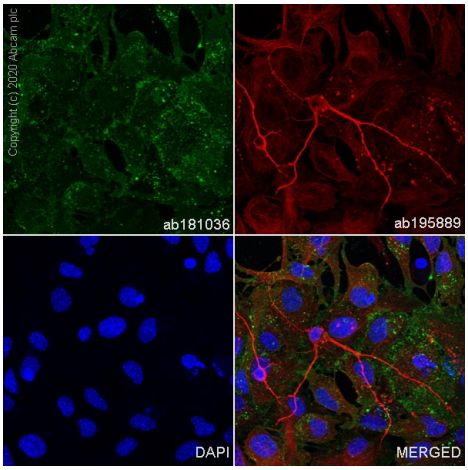
Negative control 1: PBS in place of primary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-EAAT1 antibody [EPR12686] (ab181036)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized rat primary neural / glia cells labelling EAAT1 with ab181036 at 1/50 dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing positive staining in rat primary glia cell. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 dilution (Red). The Nuclear counterstain was DAPI (Blue).

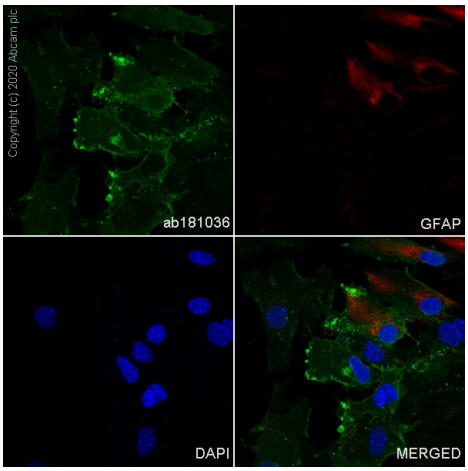
Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2 ug/ml dilution.



Immunocytochemistry/ Immunofluorescence - Anti-EAAT1 antibody [EPR12686] (ab181036)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural / glia cells labelling EAAT1 with ab181036 at 1/50 dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing positive staining in mouse primary glia cell. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 dilution (Red). The Nuclear counterstain was DAPI (Blue).

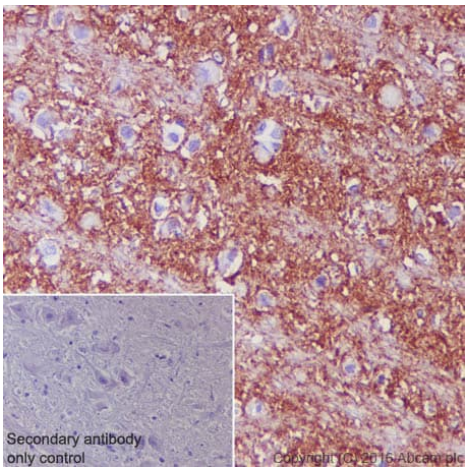
Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2 ug/ml dilution.



Immunocytochemistry/ Immunofluorescence - Anti-EAAT1 antibody [EPR12686] (ab181036)

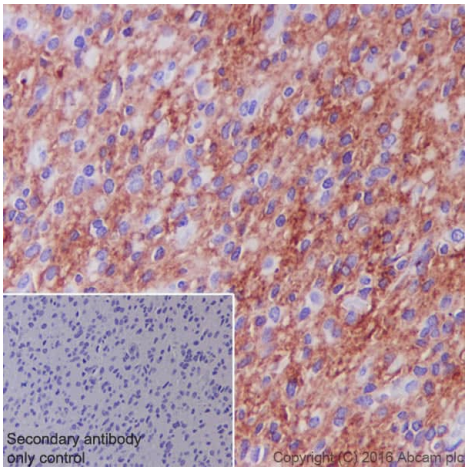
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural / glia cells labelling EAAT1 with ab181036 at 1/50 dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing positive staining in mouse primary neural / glia cell. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. Anti-Glial Fibrillary Acidic Protein (GFAP) mouse monoclonal antibody was used to counterstain tubulin at 1/100 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 2 ug/ml dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EAAT1 antibody [EPR12686] (ab181036)

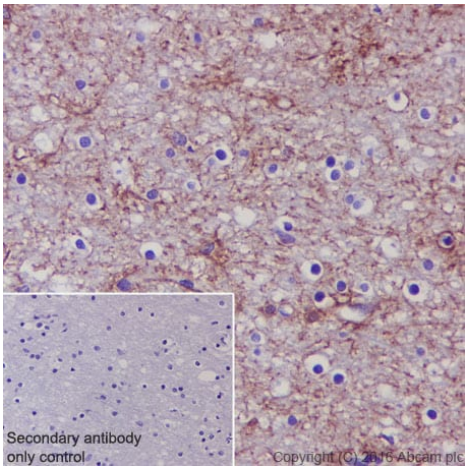
ab181036 staining EAAT1 in rat cerebral cortex tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at 1/500.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EAAT1 antibody [EPR12686] (ab181036)

ab181036 staining EAAT1 in human glioma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at 1/500.

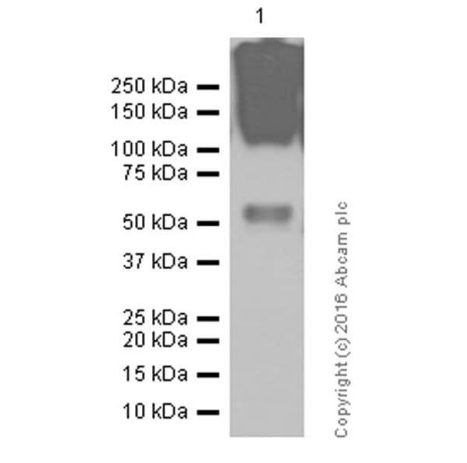
Negative control 1: PBS in place of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EAAT1 antibody [EPR12686] (ab181036)

ab181036 staining EAAT1 in human cerebral cortex tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at 1/500.

Negative control 1: PBS in place of primary antibody.



Western blot - Anti-EAAT1 antibody [EPR12686] (ab181036)

Anti-EAAT1 antibody [EPR12686] (ab181036) at 1/5000 dilution + Human cerebellum at 20 µg

Secondary

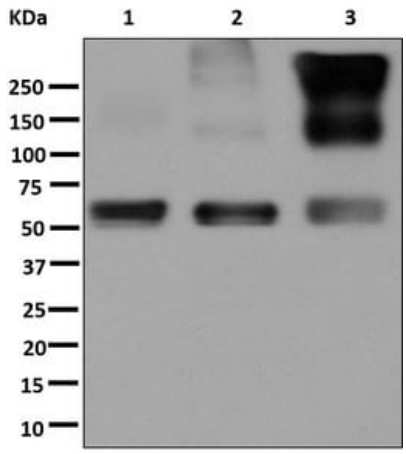
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 59 kDa

Additional bands at: 59 kDa. We are unsure as to the identity of these extra bands.

Blocking and diluting buffer: 5% NFDM/TBST

The band above (100KDa) is dimer



Western blot - Anti-EAAT1 antibody [EPR12686] (ab181036)

All lanes : Anti-EAAT1 antibody [EPR12686] (ab181036) at 1/1000 dilution

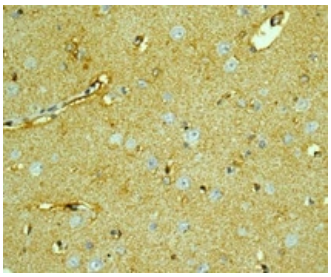
Lane 1 : Mouse brain lysate

Lane 2 : Rat brain lysate

Lane 3 : Human cerebellum lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 59 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EAAT1 antibody [EPR12686] (ab181036)

Immunohistochemical staining of EAAT1 in paraffin-embedded human brain tissue using ab181036 at a 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Anti-EAAT1 antibody [EPR12686] (ab181036)

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