abcam

Product datasheet

Anti-Glutamate receptor 4 antibody [EPR24283-69] ab280199

Recombinant RabMAb

6 Images

Overview

Product name	Anti-Glutamate receptor 4 antibody [EPR24283-69]
Description	Rabbit monoclonal [EPR24283-69] to Glutamate receptor 4
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt,ICC/IF,IHC-Fr or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Rat cerebellum and brain; Mouse cerebellum and brain; Human cerebellum tissue lysates. IHC-P: Mouse cerebrum; Rat cerebrum; Human cerebrum.
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: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR24283-69

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab280199 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
WB		1/1000. Predicted molecular weight: 102 kDa.
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt,ICC/IF,IHC-Fr or IP.

Target

Function Receptor for glutamate that functions as ligand-gated ion channel in the central nervous system and plays an important role in excitatory synaptic transmission. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. Binding of the excitatory neurotransmitter L-glutamate induces a conformation change, leading to the opening of the cation channel, and thereby converts the chemical signal to an electrical impulse. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist. In the presence of CACNG4 or CACNG7 or CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of glutamate.

Sequence similarities Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRIA4 subfamily.

Domain The M4 transmembrane segment mediates tetramerization and is required for cell surface expression.

Post-translational modifications Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-611 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-837 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis.
Phosphorylated at Ser-862 by PRKCG; phosphorylation increases plasma membrane-associated GRI4 expression.

Cellular localization Cell membrane. Cell junction, synapse, postsynaptic cell membrane. Cell projection, dendrite. Interaction with CNIH2, CNIH3 and PRKCG promotes cell surface expression.

Images

Western blot - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

All lanes : Anti-Glutamate receptor 4 antibody [EPR24283-69] (ab280199) at 1/1000 dilution

Lane 1 : Human cerebellum tissue lysate at 20 µg

Lane 2 : Human liver tissue lysate at 40 µg

Secondary

All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 102 kDa

Observed band size: 100 kDa

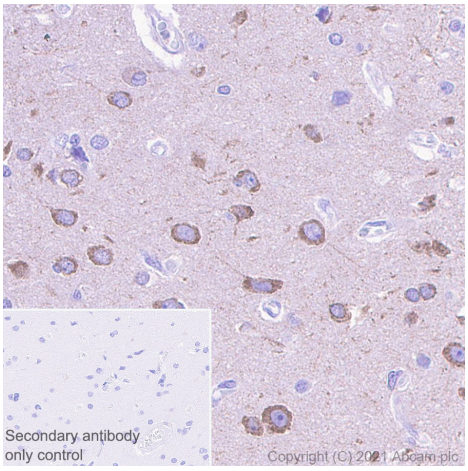
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Samples are non-boiled as boiling may cause protein aggregates.

The expression pattern is consistent to previous reports (PMID:12657691, PMID:26985043, PMID:20549383)

Negative control: human liver (PMID:1372042)

Exposure time: 3.25 seconds

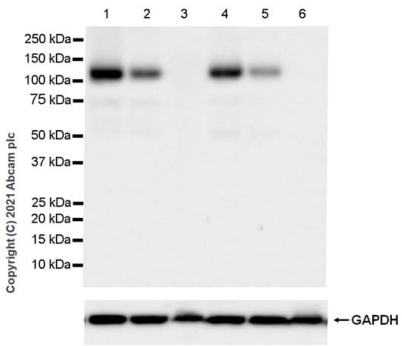


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Glutamate receptor 4 with ab280199 at 1/500 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human cerebrum. The section was incubated with ab280199 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Western blot - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

All lanes : Anti-Glutamate receptor 4 antibody [EPR24283-69] (ab280199) at 1/1000 dilution

Lane 1 : Rat cerebellum tissue lysate at 20 µg
Lane 2 : Rat brain tissue lysate at 20 µg
Lane 3 : Rat liver tissue lysate at 40 µg
Lane 4 : Mouse cerebellum tissue lysate at 20 µg
Lane 5 : Mouse brain tissue lysate at 20 µg
Lane 6 : Mouse liver tissue lysate at 40 µg

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 102 kDa
Observed band size: 100 kDa

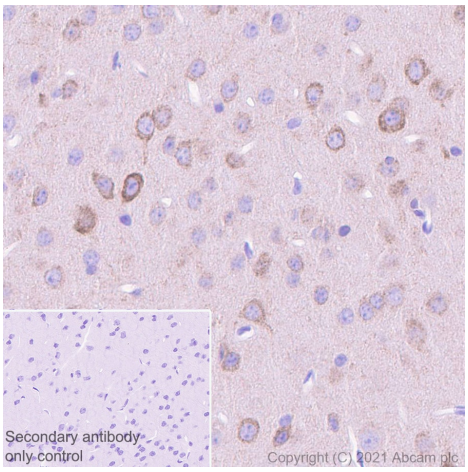
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Samples are non-boiled as boiling may cause protein aggregates.

The expression pattern is consistent to previous reports (PMID:12657691, PMID:26985043, PMID:20549383)

Negative control: liver (PMID:1372042)

Exposure time: 7.75 seconds

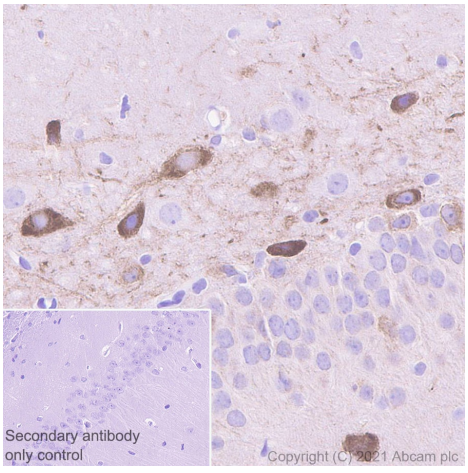


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling Glutamate receptor 4 with ab280199 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mouse cerebrum. (PMID: 20662939) The section was incubated with ab280199 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

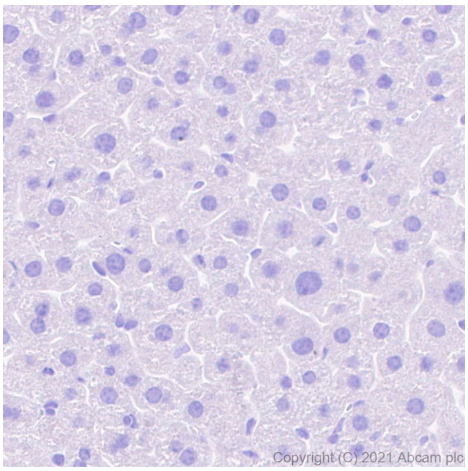


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling Glutamate receptor 4 with ab280199 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat cerebrum. The section was incubated with ab280199 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 4/MGLUR4 antibody [EPR24283-69] (ab280199)

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Glutamate receptor 4 with ab280199 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). **Negative control:** No staining on mouse liver. (PMID: 1372042) The section was incubated with ab280199 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

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