abcam

Product datasheet

Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free ab247874

Recombinant RabMAb

5 Images

Overview

Product name	Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free
Description	Rabbit monoclonal [EPR1887] to Glutamate Receptor 1 (AMPA subtype) (phospho S831) - BSA and Azide free
Host species	Rabbit
Specificity	This antibody only detects Glutamate Receptor 1 phosphorylated at Serine 831.
Tested applications	**Suitable for:** Dot blot, WB **Unsuitable for:** Flow Cyt,ICC/IF or IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	ab247874 is the carrier-free version of **ab109464**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR1887
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab247874 in the following tested applications.

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

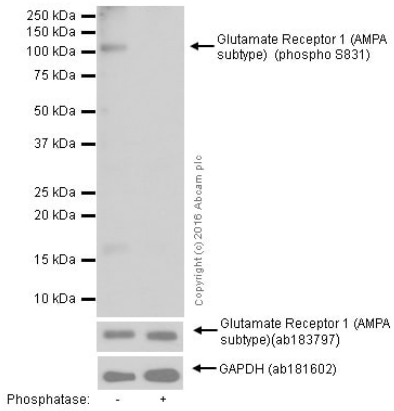
Application	Abreviews	Notes
Dot blot		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 106 kDa (predicted molecular weight: 102 kDa).

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

Target

Function	Ionotropic glutamate receptor. 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.
Tissue specificity	Widely expressed in brain.
Sequence similarities	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRIA1 subfamily.
Post-translational modifications	Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-603 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-829 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis.
Cellular localization	Cell membrane. Endoplasmic reticulum membrane. Cell junction > synapse > postsynaptic cell membrane. Interaction with CACNG2 promotes cell surface expression.

Images



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free (ab247874)

All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (**ab109464**) at 1/1000 dilution

Lane 1 : Mouse hippocampus tissue lysate
Lane 2 : Mouse hippocampus tissue lysate, membrane incubated with phosphatase

Lysates/proteins at 15 µg per lane.

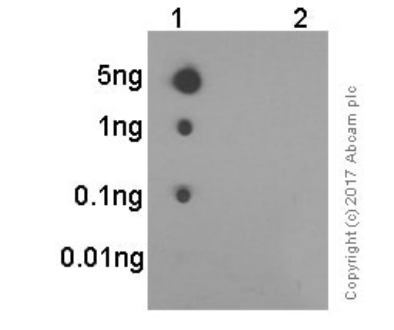
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 102 kDa
Observed band size: 106 kDa

Exposure time: 5 seconds

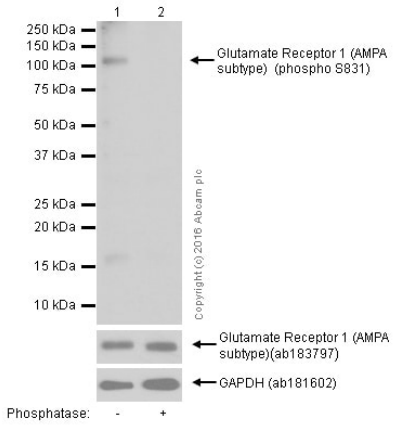
This data was developed using **ab109464**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.



Dot Blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free (ab247874)

This data was developed using **ab109464**, the same antibody clone in a different buffer formulation.Dot blot analysis of Glutamate Receptor 1 (AMPA subtype) with **ab109464** at 1/1000 exposed for 3 minutes. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) (1/100,000) was used as the secondary antibody. Blocking buffer 5% NFDM/TBST. Diluting buffer 5% NFDM/TBST.
Lane 1: Glutamate Receptor 1 (AMPA subtype) (pS831) phospho peptide
Lane 2: Glutamate Receptor 1 (AMPA subtype) non-phospho peptide



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free (ab247874)

All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (**ab109464**) at 1/1000 dilution

Lane 1 : Human cerebellum whole cell lysates
Lane 2 : Human cerebellum whole cell lysates, the membrane was incubated with phosphatase.

Lysates/proteins at 15 µg per lane.

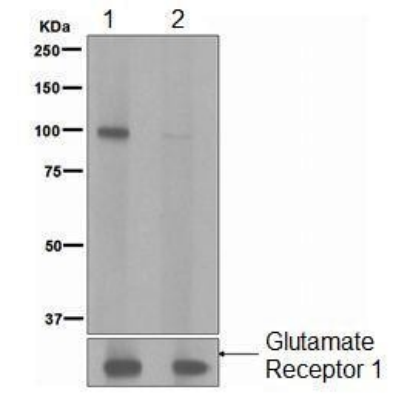
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 102 kDa
Observed band size: 106 kDa

Exposure time: 10 seconds

This data was developed using **ab109464**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] - BSA and Azide free (ab247874)

All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (**ab109464**) at 1/1000 dilution

Lane 1 : Rat brain lysates, untreated
Lane 2 : Rat brain lysates treated with Lambda Phosphatase

Lysates/proteins at 10 µg per lane.

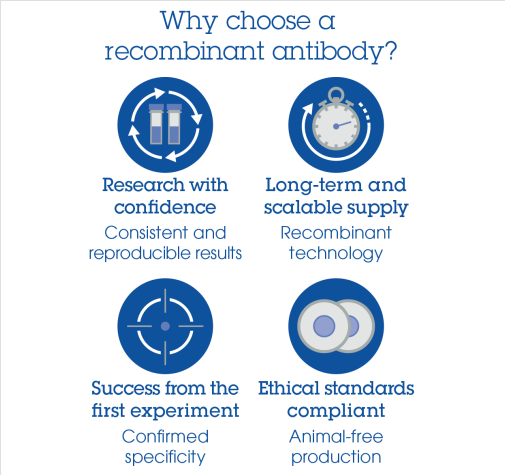
Secondary
All lanes : HRP-labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 102 kDa
Observed band size: 106 kDa

This data was developed using **ab109464**, the same antibody

clone in a different buffer formulation.

The lower panel shows Glutamate Receptor 1 detected with an alternative anti-Glutamate Receptor 1 antibody which is not dependent upon antigen phosphorylation.



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