

## Product datasheet

# Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] ab288564

Recombinant RabMAb

7 Images

### Overview

<b>Product name</b>	Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5]
<b>Description</b>	Rabbit monoclonal [EPR25325-5] to GABA A Receptor gamma 2/GABRG2
<b>Host species</b>	Rabbit
<b>Specificity</b>	Flow Cyt application does not react with Mouse species.
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt, WB, ICC/IF, IP <b>Unsuitable for:</b> IHC-Fr or IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Rat brain, Rat cerebral cortex, Mouse brain, Mouse cerebellum, Neuro-2a, SH-SY5Y, 293T and A-172 lysates. ICC: SH-SY5Y and Neuro-2a cells. Flow Cyt: 293T cells. IP: Mouse brain tissue lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA

<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR25325-5
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab288564 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
Flow Cyt		1/50. FC application does not react with Mouse species.
WB		1/1000. Predicted molecular weight: 54 kDa.
ICC/IF		1/500.
IP		1/30.

**Application notes** Is unsuitable for IHC-Fr or IHC-P.

## Target

**Function** GABA, the major inhibitory neurotransmitter in the vertebrate brain, mediates neuronal inhibition by binding to the GABA/benzodiazepine receptor and opening an integral chloride channel.

**Involvement in disease** Defects in GABRG2 are the cause of childhood absence epilepsy type 2 (ECA2) [MIM:607681]. ECA2 is a subtype of idiopathic generalized epilepsy (IGE) characterized by an onset at age 6-7 years, frequent absence seizures (several per day) and bilateral, synchronous, symmetric 3-Hz spike waves on EEG. During adolescence, tonic-clonic and myoclonic seizures develop. Some individuals manifest ECA2 occurring in combination with febrile convulsions.

Defects in GABRG2 are the cause of familial febrile convulsions type 8 (FEB8) [MIM:611277]. A febrile convulsion is defined as a seizure event in infancy or childhood, usually occurring between 6 months and 6 years of age, associated with fever but without any evidence of intracranial infection or defined pathologic or traumatic cause. Febrile convulsions affect 5-12% of infants and children up to 6 years of age. There is epidemiological evidence that febrile seizures are associated with subsequent afebrile and unprovoked seizures in 2% to 7% of patients.

Defects in GABRG2 are the cause of generalized epilepsy with febrile seizures plus type 3 (GEFS+3) [MIM:604233]. Generalized epilepsy with febrile seizures-plus refers to a rare autosomal dominant, familial condition with incomplete penetrance and large intrafamilial variability. Patients display febrile seizures persisting sometimes beyond the age of 6 years and/or a variety of afebrile seizure types. GEFS+ is a disease combining febrile seizures, generalized seizures often precipitated by fever at age 6 years or more, and partial seizures, with a variable degree of severity.

Defects in GABRG2 are a cause of severe myoclonic epilepsy in infancy (SMEI) [MIM:607208]; also called Dravet syndrome. SMEI is a rare disorder characterized by generalized tonic, clonic, and tonic-clonic seizures that are initially induced by fever and begin during the first year of life. Later, patients also manifest other seizure types, including absence, myoclonic, and simple and

complex partial seizures. Psychomotor development delay is observed around the second year of life. SMEI is considered to be the most severe phenotype within the spectrum of generalized epilepsies with febrile seizures-plus.

### Sequence similarities

Belongs to the ligand-gated ion channel (TC 1.A.9) family. Gamma-aminobutyric acid receptor (TC 1.A.9.5) subfamily. GABRG2 sub-subfamily.

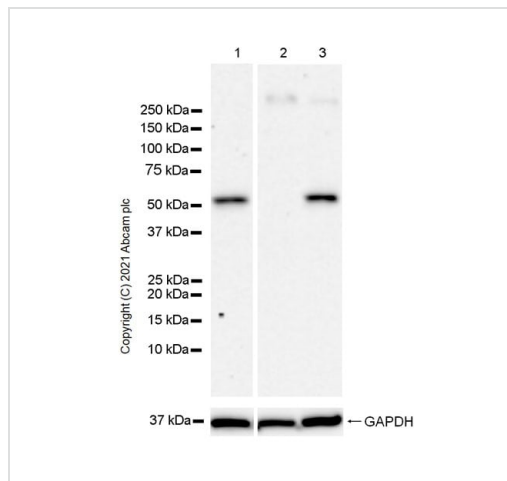
### Post-translational modifications

Palmitoylated by ZDHHC3/GODZ; which may affect presynaptic clustering and/or cell surface stability.

### Cellular localization

Cell junction > synapse > postsynaptic cell membrane. Cell membrane.

## Images



Western blot - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

**All lanes :** Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564) at 1/1000 dilution

**Lane 1 :** SH-SY5Y (human neuroblastoma epithelial cell), whole cell lysate

**Lane 2 :** HEK-293T (Human embryonic kidney epithelial cell), whole cell lysate

**Lane 3 :** A-172 (human brain glioblastoma), whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

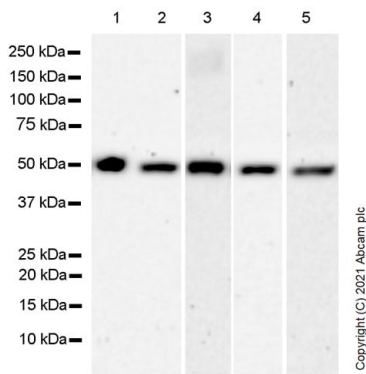
**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution

**Predicted band size:** 54 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

Negative control: 293T (PMID: 27864268).

Exposure time: 147 seconds



Western blot - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

**All lanes** : Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564) at 1/1000 dilution

**Lane 1** : Rat brain tissue lysate

**Lane 2** : Rat cerebral cortex tissue lysate

**Lane 3** : Mouse brain tissue lysate

**Lane 4** : Mouse cerebellum tissue lysate

**Lane 5** : Neuro-2a (mouse neuroblastoma neuroblast), whole cell lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

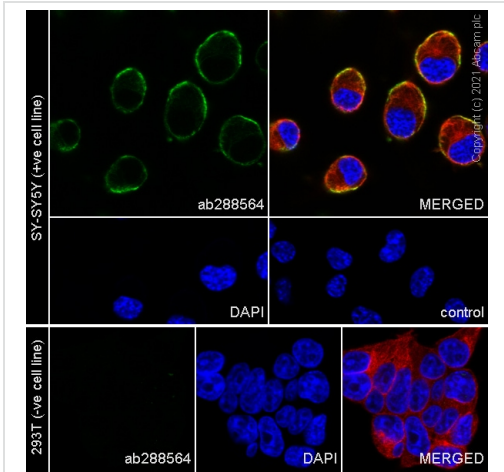
**All lanes** : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution

**Predicted band size:** 54 kDa

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

The blot of Lane 3&5 was developed using a higher sensitivity ECL substrate.

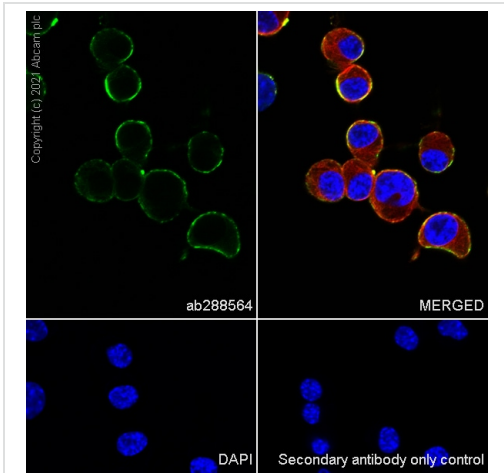
Exposure time: Lane 1, 2 &4: 147 seconds Lane 3 & 5: 3 minutes



Immunocytochemistry/ Immunofluorescence - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized SH-SY5Y cells labelling GABA A Receptor gamma 2/GABRG2 with ab288564 at 1/500 dilution, followed by **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in SH-SY5Y cell line. Negative control: 293T (PMID: 27864268) is observed. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

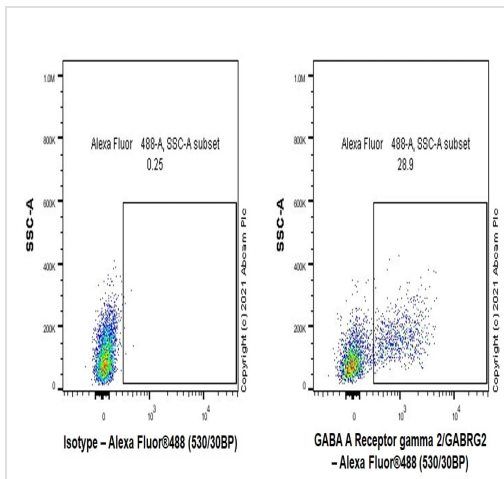
Secondary antibody only control: Secondary antibody is **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

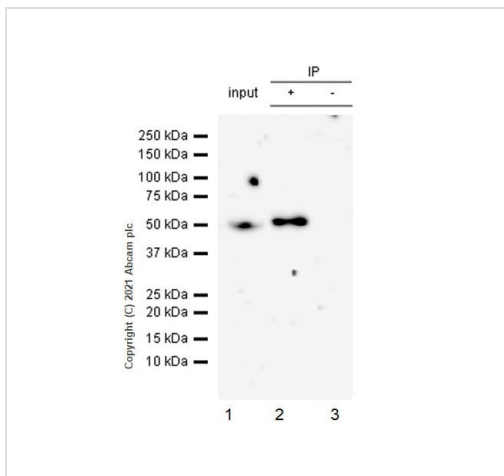
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a cells labelling GABA A Receptor gamma 2/GABRG2 with ab288564 at 1/500 dilution, followed by **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in Neuro-2a cell line. is observed. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

Flow cytometric analysis of 293T (Human embryonic kidney epithelial cell, Left) / SH-SY5Y (Human neuroblastoma epithelial cell, Right) cells labelling GABA A Receptor gamma 2/GABRG2 with ab288564 at 1/50 dilution (1ug)/ Left and Right. A Goat Anti-Rabbit IgG (Alexa Fluor® 488, [ab150081](#)) at 1/2000 dilution was used as the secondary antibody. Negative control: 293T (PMID: 27864268). Gated on viable cells.



Immunoprecipitation - Anti-GABA A Receptor gamma 2/GABRG2 antibody [EPR25325-5] (ab288564)

GABA A Receptor gamma 2/GABRG2 was immunoprecipitated from 0.35 mg Mouse brain tissue lysate 10ug with ab288564 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab288564 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)([ab131366](#)) was used at 1/5000 dilution.

Lane 1: Mouse brain tissue lysate 10ug

Lane 2: ab288564 IP in Mouse brain tissue lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab288564 in Mouse brain tissue lysate

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 101 seconds

Observed MW(KDa) 50

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-GABA A Receptor gamma 2/GABRG2 antibody  
[EPR25325-5] (ab288564)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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