abcam

ab288564

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

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR25325-5
Purification technique	Affinity purification Protein A
Specificity	Flow Cyt application does not react with Mouse species.
Concentration	0.504 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30

Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

Target data

See full target information GABRG2

Function

Gamma subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in the brain (PubMed:14993607, PubMed:16412217, PubMed:23909897, PubMed:2538761, PubMed:25489750, PubMed:27864268, PubMed:29950725, PubMed:30602789). GABA-gated chloride channels, also named GABA(A) receptors (GABAAR), consist of five subunits arranged around a central pore and contain GABA active binding site(s) located at the alpha and beta subunit interface(s) (PubMed:29950725, PubMed:30602789). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:14993607, PubMed:16412217, PubMed:2538761, PubMed:27864268, PubMed:29950725, PubMed:30602789). Gamma-2/GABRG2-containing GABAARs are found at both synaptic and extrasynaptic sites (By similarity). Chloride influx into the postsynaptic neuron following GABAAR opening decreases the neuron ability to generate a new action potential, thereby reducing nerve transmission (By similarity). GABAARs containing alpha-1 and beta-2 or -3 subunits exhibit synaptogenic activity; the gamma-2 subunit being necessary but not sufficient to induce rapid synaptic contacts formation (PubMed:23909897, PubMed:25489750). Extrasynaptic gamma-2-containing receptors contribute to the tonic GABAergic inhibition (By similarity). GABAARs function also as histamine receptor where histamine binds at the interface of two neighboring beta subunits and potentiates GABA response in a gamma-2 subunit-controlled manner (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

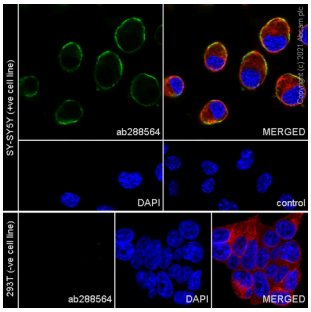
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

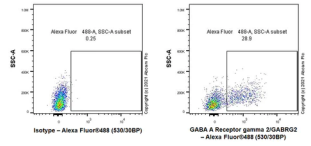
6 product images



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

GABA A Receptor gamma 2/GABRG2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GABA A Receptor gamma 2/GABRG2 antibody

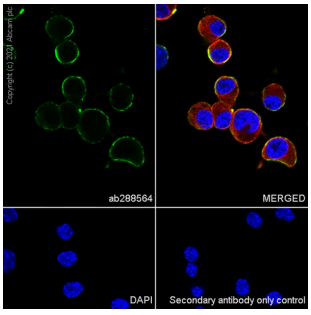
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized SH-SY5Y cells labelling GABA A Receptor gamma 2/GABRG2 with ab288564 at 1/500 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image 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.



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

GABA A Receptor gamma 2/GABRG2 Flow Cytometry (Intracellular) staining using rabbit Anti-GABA A Receptor gamma 2/GABRG2 antibody

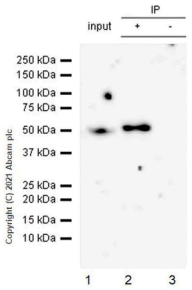
Flow cytometric analysis of 293T (Human embryonic kidney epithelial cell, Left) / SH-SY5Y (Human neuroblastoma epithelial cell, Right) cells labelling GABA A Receptor gamma 2/GABRG2 with ab288564 at 1/50 dilution (1ug)/ Left and Right. A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution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



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

GABA A Receptor gamma 2/GABRG2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GABA A Receptor gamma 2/GABRG2 antibody

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.



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.

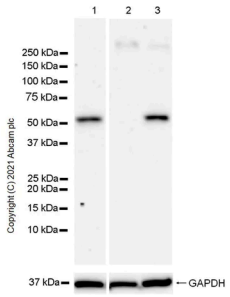
Exposure time: 101 seconds

Observed MW(KDa) 50

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

Predicted band size: 54 kDa

Observed band size: 50 kDa



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

GABA A Receptor gamma 2/GABRG2 Western blot staining using rabbit Anti-GABA A Receptor gamma 2/GABRG2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Negative control: 293T (PMID: 27864268).

Exposure time: 147 seconds

All lanes:
Western blot - 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 at 20 µg

Lane 2:
HEK-293T (Human embryonic kidney epithelial cell), whole cell lysate at 20 µg

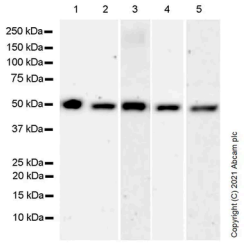
Lane 3:
A-172 (human brain glioblastoma), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 54 kDa



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

GABA A Receptor gamma 2/GABRG2 Western blot staining using rabbit Anti-GABA A Receptor gamma 2/GABRG2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/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

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

Lane 1:
Rat brain tissue lysate at 20 µg

Lane 2:
Rat cerebral cortex tissue lysate at 20 µg

Lane 3:
Mouse brain tissue lysate at 20 µg

Lane 4:
Mouse cerebellum tissue lysate at 20 µg

Lane 5:
Neuro-2a (mouse neuroblastoma neuroblast), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 54 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.