abcam

ab283351

Anti-5HT1A Receptor antibody [EPR24117-4] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR24117-4
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Target data

See full target information Htr1a

Function

G-protein coupled receptor for 5-hydroxytryptamine (serotonin) (PubMed:2140514, PubMed:2156831). Also functions as a receptor for various drugs and psychoactive substances (By similarity). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as adenylate cyclase (By similarity). HTR1A is coupled to G(i)/G(o) G alpha proteins and mediates inhibitory neurotransmission: signaling inhibits adenylate cyclase activity and activates a phosphatidylinositol-calcium second messenger system that regulates the release of Ca(2+) ions from intracellular stores (By similarity). Beta-arrestin family members regulate signaling by mediating both receptor desensitization and resensitization processes (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab283351 is the carrier-free version of ab259896.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

Compatibility
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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The 5HT1A receptor also known as 5-HT1A or serotonin receptor 1A is part of the 5-HT receptor family. This receptor functions mechanically as a G protein-coupled receptor (GPCR) with a molecular mass of approximately 46 kDa. It is widely expressed in the brain with high concentrations in areas like the hippocampus raphe nuclei and cerebral cortex. Additionally you can find 5HT1A receptors in peripheral tissues although at lower levels. They play an essential role in mediating inhibitory neurotransmission by reducing the production of cAMP.
Biological function summary	The 5HT1A receptor is important in regulating mood anxiety and cognition. These receptors function as part of a receptor complex interacting with other serotonin receptors like 5-HT2 and 5-HT3 to modulate neural processes. The 5HT1A receptor mediates its effects by inhibiting adenylate cyclase resulting in decreased levels of intracellular cAMP. This inhibition subsequently affects ion channel function and neurotransmitter release influencing various mental and physiological processes.
Pathways	Several serotonin pathways involve the 5HT1A receptor including the serotonergic and dopaminergic pathways. These pathways are essential for healthy brain function and mood regulation. The receptor also interacts with the protein RGS10 which modulates G protein signaling. RGS10 can influence the pathways the 5HT1A receptor is involved in providing a regulatory mechanism for neurotransmission and receptor activity.

Associated diseases and disorders	The 5HT1A receptor is linked to depression and anxiety disorders. Abnormalities in the function or expression of this receptor can result in altered serotonergic signaling contributing to these conditions. The receptor's relationship with the protein serotonergic 5-HT2A receptor can modulate the risk and progression of mood disorders. Researchers are actively investigating potential therapies that target the 5-HT1A receptor to alleviate symptoms of these mental health conditions.

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

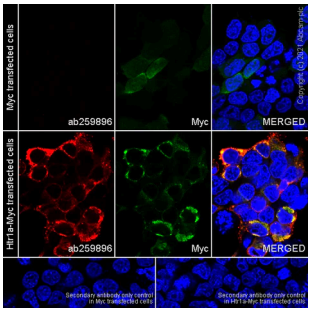
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



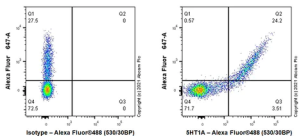
Immunocytochemistry/ Immunofluorescence - Anti-5HT1A Receptor antibody [EPR24117-4] - BSA and Azide free (ab283351)

5HT1A Receptor Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-5HT1A Receptor antibody

This data was developed using ab259896, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T cells labelling 5HT1A Receptor with ab259896 at 1/250 (2.316 ug/ml) dilution, followed by ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) antibody at 1/500 4ug/ml dilution (Green). Confocal image showing cytoplasmic staining in 293T cells transfected with myc-tagged Htr1a

expression vector is observed. ab202008 Anti-Myc tag mouse monoclonal antibody (Alexa Fluor® 488) was used to counterstain tubulin at 1/100 5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) at 1/500 4ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-5HT1A Receptor antibody [EPR24117-4] - BSA and Azide free (ab283351)

5HT1A Receptor Flow Cytometry (Intracellular) staining using rabbit Anti-5HT1A Receptor antibody

This data was developed using ab259896, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T (Human embryonic kidney epithelial cell) transfected with myc tagged 5HT1A receptor construct cells labelling 5HT1A Receptor with ab259896 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

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