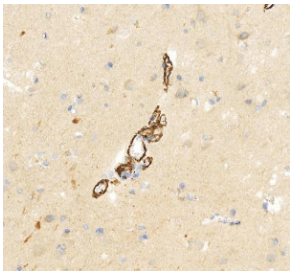
5HT2AR Antibody / Serotonin Receptor Antibody (R32043)

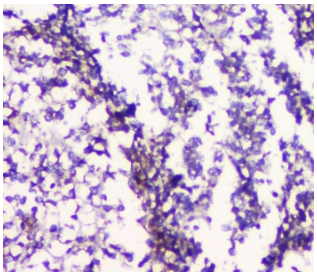
Catalog No.	Formulation	Size
R32043	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

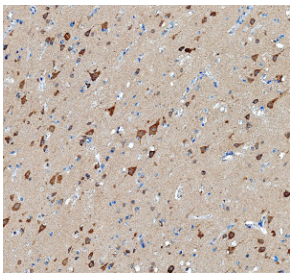
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P28223
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This 5HT2AR Antibody / Serotonin Receptor Antibody is available for research use only.



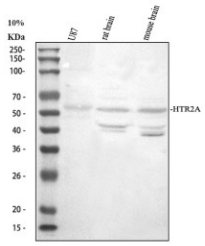
5HT2AR Antibody Human Brain IHC. Immunohistochemical staining of FFPE human brain tissue using 5HT2AR Antibody at 2 ug/ml. HIER was performed in pH 8.0 EDTA buffer. An HRP-conjugated goat anti-rabbit IgG secondary antibody with DAB substrate was used for detection. 5HT2AR Antibody, a Serotonin Receptor Antibody, demonstrates selective staining of neuronal processes and vascular-associated structures within the brain, consistent with the expected distribution of HTR2A in neural tissue.



5HT2AR Antibody Human Glioma IHC. Immunohistochemical staining of FFPE human glioma tissue using 5HT2AR Antibody at 1 ug/ml. HIER was performed in pH 6 citrate buffer. An HRP-conjugated secondary antibody with DAB substrate was used for detection. 5HT2AR Antibody, a Serotonin Receptor Antibody, demonstrates predominantly cytoplasmic staining in glioma cells with minimal background staining in the surrounding tissue.



5HT2AR Antibody by IHC. Immunohistochemistry staining of FFPE human cerebral cortex tissue using serotonin receptor antibody at 2 ug/ml. Strong HTR2A immunoreactivity is observed in numerous neuronal cell bodies, with predominantly cytoplasmic and peripheral staining accompanied by diffuse labeling of the surrounding neuropil. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0), followed by overnight primary antibody incubation at 4oC and DAB-based detection.



5HT2AR Antibody by WB. Western blot analysis of HTR2A in human U87 whole-cell lysate (lane 1), rat brain tissue lysate (lane 2), and mouse brain tissue lysate (lane 3). Samples containing 30 ug of total protein per lane were separated by 10% SDS-PAGE under reducing conditions. The serotonin receptor antibody was used at 0.5 ug/ml and detected a principal band at approximately 55-60 kDa, compared with the predicted molecular weight of 53 kDa. The modest upward migration may reflect glycosylation of this G protein-coupled receptor. Additional lower-molecular-weight bands are visible in the rodent brain samples.

Description

5HT2AR Antibody recognizes 5-hydroxytryptamine receptor 2A (HTR2A), one of the best-characterized serotonin receptors and a member of the class A G protein-coupled receptor (GPCR) family. Primarily coupled to Gq/11 proteins, 5HT2AR activates phospholipase C, leading to inositol triphosphate and diacylglycerol production, intracellular calcium mobilization, and protein kinase C activation. These signaling events regulate neuronal excitability, neurotransmitter release, synaptic plasticity, and activity-dependent gene expression. Because of its fundamental role in serotonergic neurotransmission, 5HT2AR Antibody is widely used to investigate receptor biology, GPCR signaling, and nervous system function.

5HT2AR is highly expressed throughout the cerebral cortex, particularly within pyramidal neurons of the prefrontal cortex, as well as in the hippocampus, amygdala, basal ganglia, thalamus, and other regions involved in cognition, learning, memory, mood, and sensory processing. Outside the central nervous system, HTR2A is also expressed in platelets, vascular smooth muscle, gastrointestinal tissues, fibroblasts, and selected immune cell populations, where it contributes to vascular contraction, platelet aggregation, gastrointestinal motility, and inflammatory signaling. As a Serotonin Receptor Antibody, 5HT2AR Antibody is valuable for investigating receptor localization, signal transduction, receptor trafficking, and serotonin-mediated cellular responses across multiple organ systems.

Altered HTR2A expression or activity has been associated with numerous neurological and psychiatric disorders, including schizophrenia, major depressive disorder, anxiety disorders, bipolar disorder, autism spectrum disorders, migraine, Alzheimer's disease, and Parkinson's disease. The receptor is also the principal molecular target of many atypical antipsychotic medications and serotonergic psychedelic compounds, including LSD, psilocybin, and mescaline, making 5HT2AR one of the most extensively studied GPCRs in neuroscience and neuropharmacology. Consequently, HTR2A has become an important biomarker for studies of neuronal signaling, psychiatric disease mechanisms, and therapeutic drug development.

Beyond neurotransmission, 5HT2AR influences cellular proliferation, differentiation, cytoskeletal organization, and communication between neurons and glial cells. Increasing evidence also supports roles for HTR2A in neuroinflammation, cardiovascular physiology, metabolic regulation, and cancer biology, expanding interest in this receptor beyond traditional neuroscience research. These diverse biological functions continue to drive investigations into 5HT2AR as both a disease biomarker and a therapeutic target across multiple disciplines.

5HT2AR Antibody, a Serotonin Receptor Antibody, provides a valuable research tool for investigating serotonin receptor expression, GPCR signaling, and receptor pharmacology. Researchers use 5HT2AR Antibody to study neurotransmission, synaptic plasticity, psychiatric disorders, neurodegenerative disease, cardiovascular physiology, and

the molecular mechanisms underlying serotonergic therapeutics and psychedelic drug action.

Explore additional GPCR Antibodies for receptors involved in neurotransmission, G protein-coupled signaling, sensory perception, and cellular communication.

Application Notes

Optimal dilution of the 5HT2AR antibody should be determined by the researcher.

Immunogen

Amino acids KENKKPLQLILVNTIPALAYKSSQLQMGQKKN of human 5HT2A Receptor were used as the immunogen for the 5HT2AR antibody.

Storage

After reconstitution, the 5HT2AR Antibody / Serotonin Receptor Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HTR2A Antibody, 5-Hydroxytryptamine Receptor 2A Antibody, Serotonin 2A Receptor Antibody, 5-HT2A Receptor Antibody, 5HT2A Antibody, CD Antibody

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