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ProductInformation

ANTI-SEROTONIN 5-HT$_{5A}$ RECEPTOR
Developed in Rabbit, Affinity Isolated Antibody

Product Number **S4937**

Product Description

Anti-Serotonin 5-HT$_{5A}$ Receptor is developed in rabbit using a highly purified peptide corresponding to amino acid residues 17-34 of the rat 5-HT$_{5A}$ receptor. The antibody was affinity isolated on immobilized immunogen.

Anti-Serotonin 5-HT$_{5A}$ Receptor recognizes the 5-HT$_{5A}$ Receptor protein (41 kDa) from rat brain by immunoblotting and immunohistochemistry. Immunoblot analysis also reveals a 47 kDa protein believed to be the glycosylated form of the receptor.

The monoamine serotonin (5-hydroxytryptamine [5-HT]) mediates its effects in a number of physiological processes including anxiety, depression, sexual activity and sleep through interactions with different receptor subtypes.[1] At least 14 mammalian serotonin receptor subtypes have been identified and classified into several families on the basis of common structural, pharmacological and functional criteria.[2] These receptors differ in their tissue and cellular localization, affinity for serotonin and second messenger pathways. The majority of these receptors stimulate a GTP-binding protein upon agonist stimulation and couple to adenylate cyclase or phospholipase C. In contrast, the 5-HT$_3$ receptor acts as a cation-selective channel. The serotonin receptors have generated considerable pharmacological interest as targets for the identification of selective drugs that interact with a specific receptor subtype.

The 5-HT$_{5A}$ receptor has been cloned from rat, mouse and human tissue. The pharmacological profiles of the receptor from each species are closely related.[3] The human homolog is expressed in all regions of the brain examined with little or no expression in the periphery.[3,4] It is hypothesized that the 5-HT$_{5A}$ receptor plays a role in brain development.[5] Specifically, data suggests that the 5-HT$_{5A}$ receptor couples negatively to adenylyl cyclase in astrocytes, mediating cAMP concentrations via a neuron to-to-astrocyte serotonergic signaling pathway.[6] Ligand activation of the h5-HT$_{5A}$ receptor results in functional coupling to G-proteins in HEK-293 cells effectively reducing the level of cAMP accumulation.[7]

Reagents

Anti-Serotonin 5-HT$_{5A}$ Receptor is supplied as lyophilized affinity isolated antibody (100 µl) containing 1% bovine serum albumin and 0.05% sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Preparation Instructions

Reconstitute the lyophilized vial with 100 µl deionized water. Antibody dilutions should be made in buffer containing 1-3% bovine serum albumin.

Storage/Stability

Prior to reconstitution, store at –20°C. After reconstitution, the stock antibody solution may be stored at –20°C for up 6 months. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Suggested working dilution for immunohistochemistry on frozen sections is 1:100-1:300 using the biotin-streptavidin/horseradish peroxidase. Immunohistochemical staining of rat brain correlates well with Northern blot analysis and *in situ* hybridization studies.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

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