

Product Information

ANTI-SEROTONIN 5-HT_{2A} RECEPTOR

Developed in Rabbit, Affinity Isolated Antibody

Product Number **S 4812**

Product Description

Anti-Serotonin 5-HT_{2A} Receptor is developed in rabbit using a highly purified peptide corresponding to amino acid residues 22-41 of the rat 5-HT_{2A} receptor. The antibody was affinity isolated on immobilized immunogen.

Anti-Serotonin 5-HT_{2A} Receptor recognizes the 5-HT_{2A} Receptor protein (53 kDa) from rat brain by immunoblotting and immunohistochemistry.

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-HT₃ 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_{2A} receptor is highly expressed in layer 4 of the cerebral cortex, the hippocampus and facial motor neurons.³ Additionally, the 5-HT_{2A} receptor is implicated in control of motor functions involving the dorsolateral caudate-putamen nucleus (CPN).^{4,5} Activation of the 5-HT_{2A} receptor results in membrane depolarization. Other functional correlates await further characterization.

Reagents

Anti-Serotonin 5-HT_{2A} Receptor is supplied as lyophilized affinity isolated antibody (100 µl) containing 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 to 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 1:300-1:500 using the ABC technique with free-floating sections. Low levels of glutaraldehyde (0.1%-0.3%) may be used in conjunction with paraformaldehyde for tissue perfusion fixation. Addition of intensifying reagents such as nickel ammonium sulfate to the chromogen solutions allows further dilution of the primary antibody to approximately 1:1000 or greater.

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

1. Teitler, M. and Herrick-Davis, K., Crit. Rev. Neurobiol., **8**, 175 (1994).
2. Leonard, B.E., Psychother. Psychosom., **65**, 66 (1996).

3. Roth, B.L. et al., Crit. Rev. Neurobiol., **12**, 319 (1998).
4. Rodriguez, J.J. et al., J. Comp. Neurol., **413**, 219 (1999).

5. Mijnster, M.J. et al., J. Comp. Neurol., **389**, (1997).

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