

## Product Information

### ANTI-SEROTONIN 5-HT<sub>3</sub> RECEPTOR

Developed in Rabbit,  
Affinity Isolated Antibody

Product Number **S1561**

#### Product Description

Anti-Serotonin 5-HT<sub>3</sub> Receptor is developed in rabbit using synthetic peptide (SLEKRDEMREVAR) conjugated to KLH via an N-terminal cysteine. This sequence corresponds to amino acids 444-457 from rat serotonin 5-HT<sub>3</sub> receptor protein. The amino acid sequence contains one amino acid substitution with mouse and two substitutions with human sequences for the serotonin 5-HT<sub>3</sub> receptor.

By immunohistochemistry, Anti-Serotonin 5-HT<sub>3</sub> Receptor reacts specifically with serotonin 5-HT<sub>3</sub> in mouse and rat brain sections. The antibody not recommended for immunoblotting of total brain extracts.

The monoamine serotonin (5-hydroxytryptamine) mediates a variety of physiological actions by binding to a number of distinct receptors, pharmacologically classified into several major groups. The groups differ in tissue and cellular localization, affinity for serotonin and second messenger pathways.<sup>1</sup> 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<sub>3</sub> receptor is a ligand gated ion channel that mediates a fast excitatory response.<sup>2</sup> This receptor is a member of the superfamily of ligand gated ion channels related to the nicotinic, GABA<sub>A</sub> and NMDA receptors.<sup>3</sup> Although the 5-HT<sub>3</sub> receptor was initially identified from the neuroblastoma cell line NCB-20, radioligand binding studies<sup>4</sup> and *in situ* hybridization studies<sup>5,6</sup> have localized the 5-HT<sub>3</sub> receptor to a unique distribution of neurons. This supports possible roles for the receptor in cognition and sensory input. Recent immunohistochemical analysis of rat brain revealed a broad distribution of 5-HT<sub>3</sub> activity, primarily including interneurons and motor neurons.<sup>7,8</sup>

#### Components

Anti-Serotonin 5-HT<sub>3</sub> is supplied in 0.25ml of 0.05 M sodium phosphate buffer containing 0.1% sodium azide and 0.2% gelatin.

Antibody concentration is approximately 0.1 mg/ml.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety 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.

#### Storage/Stability

Store at 2-8°C. **Do Not Freeze.** 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

The recommended concentration for immunohistochemistry is 2-5 µg/ml using floating mouse and rat brain sections fixed in 4% paraformaldehyde with DAB detection. Staining is completely abolished by incubating the affinity purified antibody with peptide at 10<sup>-6</sup> M.

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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3. Maricq, A. V., et al., Science, **254**, 432-437 (1991).
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5. Tecott, L. H., et al., Proc. Natl. Acad. Sci. USA, **90**, 1430-1434 (1993).
6. Morales, M., et al., Brain Res., **731**, 199-202 (1996).
7. Morales, M., et al., Mol. Brain Res., **36**, 251-260 (1996).
8. Morales, M., et al., J. Comp. Neurol., **385**, 385-401 (1998).

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