

Product Information

Anti-Serotonin Transporter (N-terminal)

produced in rabbit, affinity isolated antibody

Product Number **SAB4200039**

Product Description

Anti-Serotonin Transporter (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of rat serotonin transporter (SERT) (GeneID: 25553), conjugated to KLH. The corresponding sequence is highly conserved in mouse (single amino acid substitution) and in human (80% identity) SERT. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Serotonin Transporter (N-terminal) specifically recognizes human serotonin transporter (SERT). The antibody may be used in various immunochemical techniques including immunoblotting (~83 kDa). Detection of the SERT band by immunoblotting is specifically inhibited by the SERT immunizing peptide.

Serotonin (5-hydroxytryptamine; 5-HT) is a neurotransmitter in the central and peripheral nervous systems. Imbalances in 5-HT transmission are thought to be involved in mood and personality disorders, obsessive compulsive behavior (OCD), anxiety, insomnia, and eating disorders.^{1,2} Following its release, serotonin is actively cleared from the synaptic spaces into presynaptic neurons by the serotonin transporter that terminates the synaptic actions of serotonin and recycles it into the neurotransmitter pool.^{1,3}

SERT (also known as SLC6A4, 5HTT), is a high-affinity, Na⁺ and Cl⁻-dependent transporter localized in presynaptic neuronal membranes.³ The brain serotonin transporter appears to be the principal site of action of many tricyclic antidepressants, serotonin and selective reuptake inhibitors (SSRI), and a target for drugs of abuse such as cocaine and addictive amphetamines.^{2,4} SSRIs function by increasing the length of time serotonin remains in the synaptic cleft. SERT is thought to play a crucial role regulating brain serotonergic system involved in proper emotional development. The polymorphic promoter region of the SERT gene *5HTTLPR*, has been suggested to affect serotonin uptake and may play a role in the pathogenesis of depression, OCD, and aggressive behavior.⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.5-3.0 µg/mL is recommended using SH-SY5Y cell lysates.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Torres, G.E. et al., *Nat. Rev. Neurosci.*, **4**, 13-25 (2003).
2. Ozaki, N. et al., *Mol. Psychiatry*, **8**, 933-936 (2003).
3. Ramamoorthy, S. et al., *Proc. Natl. Acad. Sci. USA*, **90**, 2542-2546 (1993).
4. Millan, M.J., *Pharmacol. Ther.*, **110**, 135-350 (2006).
5. Pezawas, L. et al., *Nat. Neurosci.*, **8**, 828-834 (2005).

VS,ER,TD,KAA,PHC,MAM 06/19-1