



ANTI-SEROTONIN N-ACETYLTRANSFERASE N-TERMINAL

Developed in Rabbit, Affinity Isolated Antibody

Product Number **S 0564**

Product Description

Anti-Serotonin N-Acetyltransferase, N-terminal (arylalkylamine N-acetyltransferase, AA-NAT) is developed in rabbit using a highly-purified synthetic phospho peptide corresponding to amino acids 24-33 (CQRRHT_(p)LPAS) of mouse AA-NAT as the immunogen. This sequence is completely conserved between mouse, rat and human. Anti-amino terminal AA-NAT-specific IgG is affinity isolated from total IgG on resin-coupled non-phosphorylated peptide (amino acids 24-33).

Anti-Serotonin N-Acetyltransferase, N-terminal recognizes phosphorylated and non-phosphorylated AA-NAT (23 kDa) from rat tissue by immunoblotting.

In vertebrates, the circadian rhythm in the activity of serotonin N-acetyltransferase drives the daily rhythm of circulating melatonin which serves as the hormonal signal of the daily light/dark cycle.¹ The nocturnal oscillation in AA-NAT activity ranges among vertebrates from 10- to 100-fold depending on the species. Studies have shown that AA-NAT is regulated by cAMP at both the mRNA and protein levels.² AA-NAT has putative protein kinase A (PKA) sites at Thr29 and Ser206. Phosphorylation of AA-NAT at these residues might play a role in protein inactivation via proteasome-dependent degradation.³ The AA-NAT transcript is expressed at high levels in the pineal gland and lower levels in the retina and the Y79 retinoblastoma cell line. AA-NAT mRNA is detectable in several brain regions and the pituitary gland, but not in peripheral tissues.⁴

Reagent

Anti-Serotonin N-acetyltransferase, N-terminal is supplied as affinity isolated antibody at 1.0 mg/ml in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 0.05 % sodium azide as preservative.

Product Information

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.

Storage/Stability

Store at -20 °C. 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

The recommended working concentration is 0.5 µg/ml for immunoblotting.

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. Roseboom, P.H. et al., *Endocrinology*, **137**, 3033-3045 (1996).
2. Baler, R. et al., *J. Biol. Chem.*, **272**, 6979-6985 (1997).
3. Gastel, J.A. et al., *Science*, **279**, 1358-1360 (1998).
4. Coon, S.L. et al., *Genomics*, **34**, 76-84 (1996).

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