

Product datasheet

Anti-AANAT antibody ab3505

[1 Abreviews](#) [12 References](#)

Overview

Product name	Anti-AANAT antibody
Description	Rabbit polyclonal to AANAT
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB
Species reactivity	Reacts with: Rat Predicted to work with: Mouse, Chicken, Hamster, Human, Chimpanzee, Rhesus monkey



Immunogen Synthetic peptide corresponding to Mouse AANAT aa 1-100 (N terminal).
Database link: [O88816](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

General notes

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Purification notes	Total anti-N-terminal AA-NAT-specific IgG was affinity purified on resin-coupled non-phosphopeptide. Phospho-specific amino-terminal IgG was subsequently isolated on resin-coupled phosphopeptide.
Primary antibody notes	Pineal gland serotonin N-acetyltransferase (arylalkylamine N-acetyltransferase, AA-NAT) is an ~23 kDa protein which is the rate-limiting enzyme in melatonin synthesis. Melatonin serves as the

hormonal signal of the daily light/dark cycle, or body clock. The nocturnal oscillation in enzyme activity ranges by 10- to 100-fold depending on species among vertebrates. Studies have shown that AA-NAT is regulated by cAMP at both the mRNA and protein levels. AA-NAT has putative protein kinase A (PKA) sites at Thr 29 and Ser 206. Phosphorylation of AA-NAT at these residues might play a role in protein inactivation via proteasome-dependent degradation.

Clonality Polyclonal
Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab3505 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 23 kDa. This antibody detects an ~23 kDa protein representing unphosphorylated and phosphorylated AA-NAT from rat pineal gland whole protein extract.

Target

Function Controls the night/day rhythm of melatonin production in the pineal gland. Catalyzes the N-acetylation of serotonin into N-acetylserotonin, the penultimate step in the synthesis of melatonin.

Tissue specificity Highly expressed in pineal gland and at lower levels in the retina. Weak expression in several brain regions and in the pituitary gland.

Pathway Aromatic compound metabolism; melatonin biosynthesis; melatonin from serotonin: step 1/2.

Involvement in disease Delayed sleep phase syndrome

Sequence similarities Belongs to the acetyltransferase family. AANAT subfamily.
Contains 1 N-acetyltransferase domain.

Post-translational modifications cAMP-dependent phosphorylation on both N-terminal Thr-31 and C-terminal Ser-205 regulates AANAT activity by promoting interaction with 14-3-3 proteins.

Cellular localization Cytoplasm.

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