


Product datasheet

Anti-AANAT antibody ab3506

1 References 1 Image

Overview

Product name	Anti-AANAT antibody
Description	Rabbit polyclonal to AANAT
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Rat Predicted to work with: Mouse, Hamster, Human, Chimpanzee, Rhesus monkey 
Immunogen	Synthetic peptide corresponding to Rat AANAT aa 195-205 (C terminal). Sequence: CHTFLRRNSGC (Peptide available as ab5004) Run BLAST with Run BLAST with
General notes	This product was previously labelled as Serotonin N-acetyltransferase

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as

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-C-terminal AA-NAT-specific IgG was affinity purified on resin-coupled non-phosphopeptide. Phospho-specific carboxy-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 Thr29 and Ser206. Phosphorylation of AA-NAT at these residues might play a role in protein inactivation via proteasome-dependent degradation.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab3506** 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
WB		Use a concentration of 0.5 µg/ml. Detects a band of approximately 23 kDa. Can be blocked with AANAT peptide (ab5004) .

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	cAMP-dependent phosphorylation on both N-terminal Thr-31 and C-terminal Ser-205 regulates

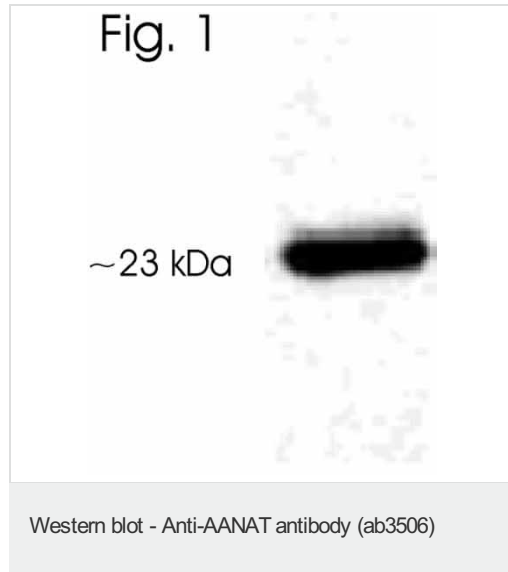
modifications

AANAT activity by promoting interaction with 14-3-3 proteins.

Cellular localization

Cytoplasm.

Images



Western blot of Serotonin N-acetyltransferase in transfected 293T cell lysate using ab3506.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Replacement or refund for products not performing as stated on the datasheet
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- Response to your inquiry within 24 hours
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- We investigate all quality concerns to ensure our products perform to the highest standards

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