**BACKGROUND**

AANAT (arylalkylamine N-acetyltransferase), also called serotonin N-acetyltransferase (SNAT) or serotonin acetylase, is a member of the acetyltransferase superfamily. It is almost exclusively expressed in the pineal gland and the retina. AANAT activity is high at night and low during the day due to the 10- to 100-fold increase in the amount of active AANAT at night. Retinal exposure to light causes cAMP levels to decrease in photoreceptor cells and, as a result, AANAT is targeted for degradation by proteasomal proteolysis. AANAT plays an important role as the rate limiting enzyme in melatonin synthesis. It is responsible for catalyzing the N-acetylation of serotonin to N-acetylserotonin, which is then converted to melatonin by hydroxyindole-O-methyltransferase. Melatonin is an important hormone that is involved in many physiological processes including immune function, seasonal reproduction, retinal physiology and circadian entrainment.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: AANAT (human) mapping to 17q25.1; Aanat (mouse) mapping to 11E2.

**SOURCE**

AANAT (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AANAT of mouse origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-55612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**STORAGE**

Store at 4°C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

AANAT (P-20) is recommended for detection of AANAT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein [1 ml of cell lysate]), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AANAT (P-20) is also recommended for detection of AANAT in additional species, including equine and canine. Suitable for use as control antibody for AANAT siRNA (h): sc-61928, AANAT siRNA (m): sc-61929, AANAT shRNA Plasmid (h): sc-61928-SH, AANAT shRNA Plasmid (m): sc-61929-SH, AANAT shRNA (h) Lentiviral Particles: sc-61928-V and AANAT shRNA (m) Lentiviral Particles: sc-61929-V. Molecular Weight of AANAT: 23 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

AANAT (P-20): sc-55612. Western blot analysis of AANAT expression in Y79 whole cell lysate.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.