# SANTA CRUZ BIOTECHNOLOGY, INC.

# ABAT (K-15): sc-160120



## BACKGROUND

In the central nervous system GABA ( $\gamma$ -aminobutyric acid) functions as the main inhibitory transmitter by increasing a CI<sup>-</sup> conductance that inhibits neuronal firing. ABAT (4-aminobutyrate aminotransferase), also known as GABAT (GABA aminotransferase), L-AIBAT or (S)-3-amino-2-methylpropionate transaminase, is a 500 amino acid mitochondrial matrix protein belonging to the class-III pyridoxal-phosphate-dependent aminotransferase family, which catabolizes GABA into succinic semialdehyde. Existing as a homodimer, ABAT binds pyridoxal phosphate as a cofactor and is expressed in liver, brain, pancreas, kidney, placenta and heart. The gene encoding ABAT maps to human chromosome 16p13.2, and defects in ABAT are the cause of GABA-AT deficiency, which is characterized by hypotonia, hyperreflexia, psychomotor retardation, lethargy, EEG abnormalities and refractory seizures.

## CHROMOSOMAL LOCATION

Genetic locus: ABAT (human) mapping to 16p13.2; Abat (mouse) mapping to 16 A1.

## SOURCE

ABAT (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ABAT of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160120 P, (100  $\mu$ g 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

ABAT (K-15) is recommended for detection of ABAT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ABAT (K-15) is also recommended for detection of ABAT in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ABAT siRNA (h): sc-93288, ABAT siRNA (m): sc-140745, ABAT shRNA Plasmid (h): sc-93288-SH, ABAT shRNA Plasmid (m): sc-140745-SH, ABAT shRNA (h) Lentiviral Particles: sc-93288-V and ABAT shRNA (m) Lentiviral Particles: sc-140745-V.

Molecular Weight of ABAT: 56 kDa.

Positive Controls: ABAT (h3): 293T Lysate: sc-159887, KNRK whole cell lysate: sc-2214 or Hep G2 cell lysate: sc-2227.

#### **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





ABAT (K-15): sc-160120. Western blot analysis of ABAT expression in KNRK  $({\bm A})$  and Hep G2  $({\bm B})$  whole cell lysates.

ABAT (K-15): sc-160120. Western blot analysis of ABAT expression in non-transfected: sc-117752 (A) and human ABAT transfected: sc-159887 (B) 293T whole cell lysates.

### **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.

#### MONOS Satisfation Guaranteed

Try ABAT (B-12): sc-393769 or ABAT (B-5): sc-393142, our highly recommended monoclonal alternatives to ABAT (K-15).