SANTA CRUZ BIOTECHNOLOGY, INC.

KAT II (S-19): sc-54021

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Kynurenine aminotransferases belong to the class I pyridoxal-phosphate-dependent aminotransferase family and contain the members KAT I, KAT II and KAT III. KAT II is a mitochondrial protein involved in lysine degradation. KAT II is expressed highly in liver, but can also be detected in heart, brain, kidney, pancreas, ovary and testis. Like KAT I, KAT II functions in the catalysis of the reaction L-2-aminoadipate + 2-oxoglutarate→2-oxoglutaramate + L-glutamate. KAT II is thought to function as a homodimer.

REFERENCES

1. Guidetti, P., et al. 1998. Characterization of rat brain kynurenine aminotransferases I and II. J. Neurosci. Res. 50: 457-465.
2. Yu, P., et al. 1999. Genomic organization and expression analysis of mouse kynurenine aminotransferase II, a possible factor in the pathophysiology of Huntington's disease. Mamm. Genome 10: 845-852.
3. Battaglia, G., et al. 2000. Some metabotropic glutamate receptor ligands reduce kynurenate synthesis in rats by intracellular inhibition of kynurenine aminotransferase II. J. Neurochem. 75: 2051-2060.
4. Kocki, T., et al. 2003. L-cysteine sulphinate, endogenous sulphur-containing amino acid, inhibits rat brain kynurenic acid production via selective interference with kynurenine aminotransferase II. Neurosci. Lett. 346: 97-100.
5. Yu, P., et al. 2004. Biochemical and phenotypic abnormalities in kynurenine aminotransferase II-deficient mice. Mol. Cell. Biol. 24: 6919-6930.
6. Wejksza, K., et al. 2005. Demonstration of kynurenine aminotransferases I and II and characterization of kynurenic acid synthesis in oligodendrocyte cell line (OLN-93). Neurochem. Res. 30: 963-968.
7. Chon, H., et al. 2005. Crystal structure of a human kynurenine aminotransferase II homologue from *Pyrococcus horikoshii* OT3 at 2.20 A resolution. Proteins 61: 685-688.
8. Rzeski, W., et al. 2005. Demonstration of kynurenine aminotransferases I and II and characterization of kynurenic acid synthesis in cultured cerebral cortical neurons. J. Neurosci. Res. 80: 677-682.
9. Guidetti, P., et al. 2006. Astrocytic localization of kynurenine aminotransferase II in the rat brain visualized by immunocytochemistry. Glia 55: 78-92.

CHROMOSOMAL LOCATION

Genetic locus: AADAT (human) mapping to 4q33.

SOURCE

KAT II (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KAT II of human 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-54021 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KAT II (S-19) is recommended for detection of KAT II of 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).

Suitable for use as control antibody for KAT II siRNA (h): sc-77358, KAT II shRNA Plasmid (h): sc-77358-SH and KAT II shRNA (h) Lentiviral Particles: sc-77358-V.

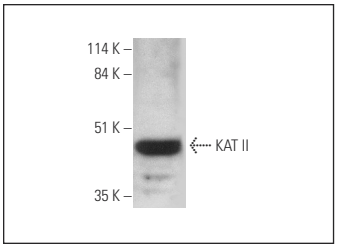
Molecular Weight of KAT II: 47 kDa.

Positive Controls: human liver extract: sc-363766 or KAT II (m): 293T Lysate: sc-121178.

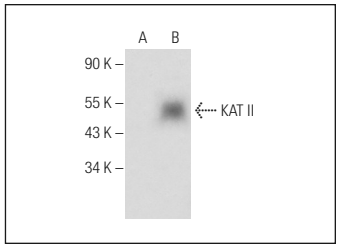
RECOMMENDED SECONDARY REAGENTS

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



KAT II (S-19): sc-54021. Western blot analysis of KAT II expression in human liver tissue extract.



KAT II (S-19): sc-54021. Western blot analysis of KAT II expression in non-transfected: sc-117752 (**A**) and mouse KAT II transfected: sc-121178 (**B**) 293T whole cell lysates.

STORAGE

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

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.