

# KAT II (A-2): sc-515377

## BACKGROUND

Kynurenine aminotransferases belong to the class-I pyridoxal-phosphate-dependent aminotransferase family and contain the members KAT I, KAT II, and KAT III. 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-oxoglutarate + L-glutamate. KAT II is thought to function as a homodimer.

## REFERENCES

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- 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.
- 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.
- Yu, P., et al. 2004. Biochemical and phenotypic abnormalities in kynurenine aminotransferase II-deficient mice. *Mol. Cell. Biol.* 24: 6919-6930.
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- Chon, H., et al. 2005. Crystal structure of a human kynurenine aminotransferase II homologue from *Pyrococcus horikoshii* OT3 at 2.20 Å resolution. *Proteins* 61: 685-688.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: AADAT (human) mapping to 4q33; Aadat (mouse) mapping to 8 B3.1.

## SOURCE

KAT II (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 158-183 within an internal region of KAT II of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515377 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

KAT II (A-2) is recommended for detection of KAT II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-77359, KAT II shRNA Plasmid (h): sc-77358-SH, KAT II shRNA Plasmid (m): sc-77359-SH, KAT II shRNA (h) Lentiviral Particles: sc-77358-V and KAT II shRNA (m) Lentiviral Particles: sc-77359-V.

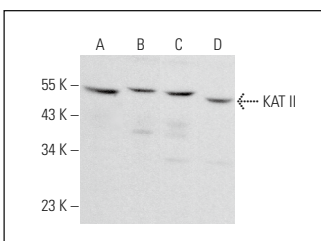
Molecular Weight of KAT II: 47 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, human liver extract: sc-363766 or EOC 20 whole cell lysate: sc-364187.

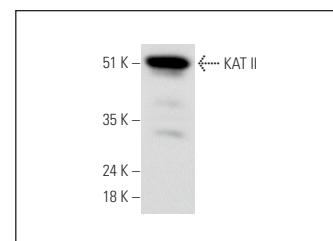
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



KAT II (A-2): sc-515377. Western blot analysis of KAT II expression in NIH/3T3 (A), SH-SY5Y (B), A-10 (C) and EOC 20 (D) whole cell lysates.



KAT II (A-2): sc-515377. Western blot analysis of KAT II expression in human liver tissue extract.

## RESEARCH USE

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