

KAT I (N-15): sc-54015

BACKGROUND

Kynurenine aminotransferases KAT I, KAT II and KAT III belong to the class-I pyridoxal-phosphate-dependent aminotransferase family. KAT I is a cytoplasmic protein involved in glutamine catabolism. KAT I functions in the catalysis of the transamination of L-kinurenine to form kynurenic acid, a neuroprotective and anticonvulsant metabolite of tryptophan. Kynurenic acid is involved in synaptic transmission and has been implicated in a number of neurological disorders including schizophrenia and Huntington's disease. KAT I also functions in the metabolism of cysteine conjugates in some halogenated alkenes and alkanes to form reactive metabolites. KAT I has three isoforms. Isoform 1 is the full length protein, isoform 2 lacks amino acids 68-117 and isoform 3 lacks amino acids 251-422. Based on sequence similarity, KAT I is thought to function as a homodimer.

REFERENCES

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- Tamburin, M., et al. 1999. Kynurenine aminotransferase I (KAT I) isoform gene expression in the rat brain: an *in situ* hybridization study. *Neuroreport* 10: 61-65.
- Milart, P., et al. 2001. Kynurenine aminotransferase I activity in human placenta. *Placenta* 22: 259-261.
- Kwok, J.B., et al. 2002. A missense mutation in kynurenine aminotransferase-1 in spontaneously hypertensive rats. *J. Biol. Chem.* 277: 35779-35782.
- Rejda, R., et al. 2003. Ontogenic changes of kynurenine aminotransferase I activity and its expression in the chicken retina. *Vision Res.* 43: 1513-1517.
- Knyihár-Csillik, E., et al. 2004. Decreased expression of kynurenine aminotransferase-I (KAT I) in the substantia nigra of mice after 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) treatment. *Neuroscience* 126: 899-914.
- Rossi, F., et al. 2004. Crystal structure of human kynurenine aminotransferase I. *J. Biol. Chem.* 279: 50214-50220.

CHROMOSOMAL LOCATION

Genetic locus: CCBL1 (human) mapping to 9q34.11; Ccbl1 (mouse) mapping to 2 B.

SOURCE

KAT I (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of KAT I 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-54015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KAT I (N-15) is recommended for detection of KAT I isoforms 1, 2 and 3 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).

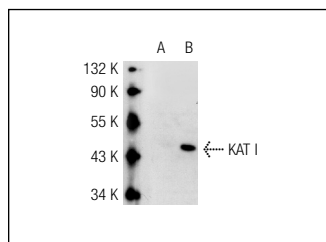
KAT I (N-15) is also recommended for detection of KAT I isoforms 1, 2 and 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KAT I siRNA (h): sc-105587, KAT I siRNA (m): sc-77396, KAT I shRNA Plasmid (h): sc-105587-SH, KAT I shRNA Plasmid (m): sc-77396-SH, KAT I shRNA (h) Lentiviral Particles: sc-105587-V and KAT I shRNA (m) Lentiviral Particles: sc-77396-V.

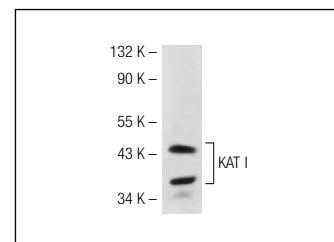
Molecular Weight of KAT I: 48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or KAT I (m): 293T Lysate: sc-127032.

DATA



KAT I (N-15): sc-54015. Western blot analysis of KAT I expression in non-transfected: sc-117752 (A) and mouse KAT I transfected: sc-127032 (B) 293T whole cell lysates.



KAT I (N-15): sc-54015. Western blot analysis of KAT I expression in HeLa whole cell lysate.

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.

MONOS
Satisfaction
Guaranteed

Try **KAT I (C-7): sc-374531** or **KAT I (B-8): sc-271709**, our highly recommended monoclonal alternatives to KAT I (N-15).