

TAT (H-9): sc-376292



The Power to Question

BACKGROUND

TAT (tyrosine aminotransferase) is a 454 amino acid protein that localizes to mitochondria and belongs to the class-I pyridoxal-phosphate-dependent aminotransferase family. Existing as a homodimer, TAT uses pyridoxal phosphate as a cofactor to catalyze the conversion of L-tyrosine into p-hydroxyphenylpyruvate, a reaction that is important in amino acid degradation. Defects in the gene encoding TAT are the cause of tyrosinemia type 2 (TYRO2), an inborn error of metabolism that is associated with elevated levels of tyrosine in blood and urine and is characterized by palmoplantar keratosis, painful corneal ulcers and mental retardation. The gene encoding TAT maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

1. Andersson, S.M. 1982. Induction of cytosolic tyrosine aminotransferase by dexamethasone in organ culture of fetal human liver. *Early Hum. Dev.* 6: 165-169.
2. Rettenmeier, R., et al. 1990. Isolation and characterization of the human tyrosine aminotransferase gene. *Nucleic Acids Res.* 18: 3853-3861.
3. Natt, E., et al. 1992. Point mutations in the tyrosine aminotransferase gene in tyrosinemia type II. *Proc. Natl. Acad. Sci. USA* 89: 9297-9301.
4. Hühn, R., et al. 1998. Novel and recurrent tyrosine aminotransferase gene mutations in tyrosinemia type II. *Hum. Genet.* 102: 305-313.

CHROMOSOMAL LOCATION

Genetic locus: TAT (human) mapping to 16q22.2; Tat (mouse) mapping to 8 D3.

SOURCE

TAT (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 99-127 within an internal region of TAT of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TAT (H-9) is available conjugated to agarose (sc-376292 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376292 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376292 PE), fluorescein (sc-376292 FITC), Alexa Fluor® 488 (sc-376292 AF488), Alexa Fluor® 546 (sc-376292 AF546), Alexa Fluor® 594 (sc-376292 AF594) or Alexa Fluor® 647 (sc-376292 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376292 AF680) or Alexa Fluor® 790 (sc-376292 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376292 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

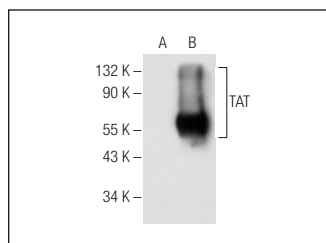
TAT (H-9) is recommended for detection of TAT of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 TAT siRNA (h): sc-93382, TAT siRNA (m): sc-154082, TAT shRNA Plasmid (h): sc-93382-SH, TAT shRNA Plasmid (m): sc-154082-SH, TAT shRNA (h) Lentiviral Particles: sc-93382-V and TAT shRNA (m) Lentiviral Particles: sc-154082-V.

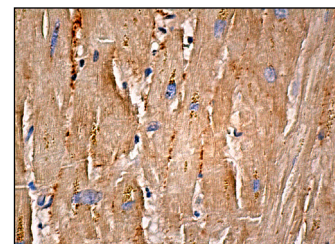
Molecular Weight of TAT: 50 kDa.

Positive Controls: TAT (m7): 293T Lysate: sc-123923.

DATA



TAT (H-9): sc-376292. Western blot analysis of TAT expression in non-transfected: sc-117752 (A) and mouse TAT transfected: sc-123923 (B) 293T whole cell lysates.



TAT (H-9): sc-376292. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Shen, B., et al. 2014. Relaxed evolution in the tyrosine aminotransferase gene *tat* in old world fruit bats (Chiroptera: Pteropodidae). *PLoS ONE* 9: e97483.
2. Zhang, L., et al. 2017. A peptide derived from apoptin inhibits glioma growth. *Oncotarget* 8: 31119-31132.
3. Xu, Y., et al. 2020. Chaperone-mediated autophagy regulates the pluripotency of embryonic stem cells. *Science* 369: 397-403.
4. Dai, W., et al. 2022. Glutamine synthetase limits β -catenin-mutated liver cancer growth by maintaining nitrogen homeostasis and suppressing mTORC1. *J. Clin. Invest.* 132: e161408.

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.