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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# AICAR transformylase (m): 293T Lysate: sc-118294

## BACKGROUND

The bifunctional purine biosynthesis protein ATIC (also designated PURH) contains AICAR transformylase and IMP cyclohydrolase activities. AICAR (5-aminoimidazole-4-carboxamide ribonucleotide) transformylase catalyzes the second to last step in purine biosynthesis, playing an important role in the production of nucleotides and IMP. Defects in the ATIC transformylase gene can cause AICA-rebursia, also designated AICA-ribosiduria, an inborn error in purine biosynthesis that is neurologically cataclysmic. Individuals with AICA-rebursia accumulate AICA-riboside, also designated ZMP, and its derivatives in erythrocytes and fibroblasts. Patients also excrete very large amounts of AICA-riboside in the urine. Mental retardation, epilepsy, dysmorphic features and congenital blindness are all symptoms of this disease.

## REFERENCES

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7. Hu, Z., et al. 2005. A role for hypothalamic malonyl-CoA in the control of food intake. *J. Biol. Chem.* 280: 39681-39683.
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9. Camacho, R.C., et al. 2005. 5-aminoimidazole-4-carboxamide-1- $\beta$ -D-ribofuranoside renders glucose output by the liver of the dog insensitive to a pharmacological increment in Insulin. *Am. J. Physiol. Endocrinol. Metab.* 289: E1039- E1043.

## CHROMOSOMAL LOCATION

Genetic locus: Atic (mouse) mapping to 1 C3.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PRODUCT

AICAR transformylase (m): 293T Lysate represents a lysate of mouse AICAR transformylase transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

AICAR transformylase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive AICAR transformylase antibodies. Recommended use: 10-20  $\mu$ l per lane.

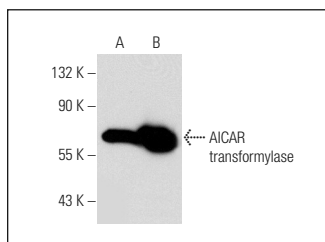
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

AICAR transformylase (F38 P7 H9): sc-53612 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse AICAR transformylase expression in AICAR transformylase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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.

## DATA



AICAR transformylase (F38 P7 H9): sc-53612. Western blot analysis of AICAR transformylase expression in non-transfected: sc-117752 (A) and mouse AICAR transformylase transfected: sc-118294 (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](http://www.scbt.com) for detailed protocols and support products.