

SNAT1 (h2): 293T Lysate sc-111142

BACKGROUND

The sodium-coupled neutral amino acid transporters (SNAT) of the SLC38 gene family include system A subtypes SNAT1, SNAT2 and SNAT4 and system N subtypes SNAT3 and SNAT5. The SLC38 transporters are essential for the uptake of nutrients, energy production, metabolism, detoxification and the cycling of neurotransmitters. The SNAT1 protein, also designated ATA1 or NAT2 is encoded by the human gene SLC38A1, which maps to chromosome 12q13.11. SNAT1 is responsible for the transport of glutamine, an intermediate in the synthesis of urea, and may be involved in the generation of glutamate in the retina. SNAT1 protein may be detected in some tissues such as heart, brain and placenta and expression levels are enriched in certain neuronal populations within the CNS. SNAT1 is not present in astrocytes.

REFERENCES

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2. Wang, H., et al. 2000. Cloning and functional expression of ATA1, a subtype of amino acid transporter A, from human placenta. *Biochem. Biophys. Res. Commun.* 273: 1175-1179.
3. Gu, S., et al. 2001. Characterization of an N-system amino acid transporter expressed in retina and its involvement in glutamine transport. *J. Biol. Chem.* 276: 24137-24144.
4. Freeman, T.L., et al. 2002. ATA2-mediated amino acid uptake following partial hepatectomy is regulated by redistribution to the plasma membrane. *Arch. Biochem. Biophys.* 400: 215-222.
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6. Sidoryk, M., et al. 2004. Increased expression of a glutamine transporter SNAT3 is a marker of malignant gliomas. *Neuroreport* 15: 575-578.
7. Desforges, M., et al. 2005. The SNAT4 isoform of the system A amino acid transporter is expressed in human placenta. *Am. J. Physiol. Cell. Physiol.* 290: C305-312.

CHROMOSOMAL LOCATION

Genetic locus: SLC38A1 (human) mapping to 12q13.11.

PRODUCT

SNAT1 (h2): 293T Lysate represents a lysate of human SNAT1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

SNAT1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive SNAT1 antibodies. Recommended use: 10-20 µl per lane.

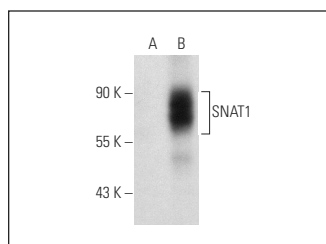
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SNAT1 (H-9): sc-137032 is recommended as a positive control antibody for Western Blot analysis of enhanced human SNAT1 expression in SNAT1 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-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.

DATA



SNAT1 (H-9): sc-137032. Western blot analysis of SNAT1 expression in non-transfected: sc-117752 (A) and human SNAT1 transfected: sc-111142 (B) 293T whole cell lysates.

RESEARCH USE

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