

SNAT2 (h): 293T Lysate: sc-113599

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. SNAT2, also designated ATA2, PRO1068 and SAT2, is encoded by the human gene SLC38A2. The functional role of SNAT2 in the nervous system is unclear. Protein expression is notably enriched in the spinal cord and brain stem nuclei of the auditory system. System A transport proteins are also present in placental tissue. These SNAT proteins may play a significant role in fetal development and inhibition of the transport system has been associated with fetal growth retardation.

REFERENCES

1. 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.
2. Hatanaka, T., et al. 2000. Primary structure, functional characteristics and tissue expression pattern of human ATA2, a subtype of amino acid transport system A. *Biochim. Biophys. Acta* 1467: 1-6.
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.
5. Pali, S.S., et al. 2004. Transcriptional control of the human sodium-coupled neutral amino acid transporter system A gene by amino acid availability is mediated by an intronic element. *J. Biol. Chem.* 279: 3463-3471.
6. Sidoryk, M., et al. 2004. Increased expression of a glutamine transporter SNAT3 is a marker of malignant gliomas. *Neuroreport* 15: 575-578.
7. Gonzalez-Gonzalez, I.M., et al. 2005. Immunohistochemical localization of the amino acid transporter SNAT2 in the rat brain. *Neuroscience* 130: 61-73.

CHROMOSOMAL LOCATION

Genetic locus: SLC38A2 (human) mapping to 12q13.11.

PRODUCT

SNAT2 (h): 293T Lysate represents a lysate of human SNAT2 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

SNAT2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SNAT2 antibodies. Recommended use: 10-20 µl per lane.

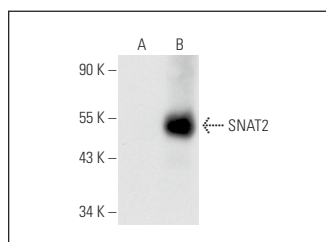
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SNAT2 (G-8): sc-166366 is recommended as a positive control antibody for Western Blot analysis of enhanced human SNAT2 expression in SNAT2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

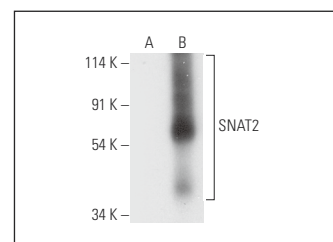
RECOMMENDED SUPPORT REAGENTS

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



SNAT2 (G-8): sc-166366. Western blot analysis of SNAT2 expression in non-transfected: sc-117752 (A) and human SNAT2 transfected: sc-113599 (B) 293T whole cell lysates.



SNAT2 (C-6): sc-514037. Western blot analysis of SNAT2 expression in non-transfected: sc-117752 (A) and human SNAT2 transfected: sc-113599 (B) 293T whole cell lysates.

RESEARCH USE

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