SANTA CRUZ BIOTECHNOLOGY, INC.

# SNAT3 (H-60): sc-67082

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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. SNAT3, also designated SN1, G17 and NAT1, is encoded by the human gene SLC38A3. SNAT3 is a gluatmine transporter expressed in astroglia from embryonic stages through adulthood, as well as in the liver. Expression levels for SNAT3 in postnatal brain are twice that of normal adult. Increased expression of SNAT3 may also serve as a marker of primary malignant gliomas *in situ*.

## 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. Boulland, J.L., et al. 2003. Highly differential expression of SN1, a bidirectional glutamine transporter, in astroglia and endothelium in the developing rat brain. Glia 41: 260-275.
6. Palii, 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.
7. Sidoryk, M., et al. 2004. Increased expression of a glutamine transporter SNAT3 is a marker of malignant gliomas. Neuroreport 15: 575-578.
8. Gu, S., et al. 2005. Differential regulation of amino acid transporter SNAT3 by Insulin in hepatocytes. J. Biol. Chem. 280: 26055-26062.


## CHROMOSOMAL LOCATION

Genetic locus: SLC38A3 (human) mapping to 3p21.31.

## SOURCE

SNAT3 (H-60) is a rabbit polyclonal antibody raised against amino acids 1-60 mapping at the N-terminus of SNAT3 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.

## RESEARCH USE

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

## APPLICATIONS

SNAT3 (H-60) is recommended for detection of SNAT3 of 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).

SNAT3 (H-60) is also recommended for detection of SNAT3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SNAT3 siRNA (h): sc-44980, SNAT3 shRNA Plasmid (h): sc-44980-SH and SNAT3 shRNA (h) Lentiviral Particles: sc-44980-V.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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