SANTA CRUZ BIOTECHNOLOGY, INC.

SNAT4 (H-9): sc-376664

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. SNAT4, also designated ATA3, NAT3 or PAAT, has been mapped to human chromosome 12q13.11. Tissue expression of the SNAT4 protein is most predominant in embryonic and adult liver and to a much lesser extent in the muscle, kidney and pancreas. System A transport proteins may play a significant role in fetal development and inhibition of the transport system has been associated with fetal growth retardation.

CHROMOSOMAL LOCATION

Genetic locus: Slc38a4 (mouse) mapping to 15 F1.

SOURCE

SNAT4 (H-9) is a mouse monoclonal antibody raised against amino acids 1-60 mapping within an N-terminal cytoplasmic domain of SNAT4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SNAT4 (H-9) is available conjugated to agarose (sc-376664 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376664 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376664 PE), fluorescein (sc-376664 FITC), Alexa Fluor® 488 (sc-376664 AF488), Alexa Fluor® 546 (sc-376664 AF546), Alexa Fluor® 594 (sc-376664 AF594) or Alexa Fluor® 647 (sc-376664 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376664 AF680) or Alexa Fluor® 790 (sc-376664 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USAs

RESEARCH USE

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

APPLICATIONS

SNAT4 (H-9) is recommended for detection of SNAT4 of mouse 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 SNAT4 siRNA (m): sc-44995, SNAT4 shRNA Plasmid (m): sc-44995-SH and SNAT4 shRNA (m) Lentiviral Particles: sc-44995-V.

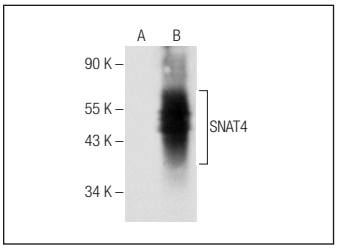
Molecular Weight of SNAT4: 60 kDa.

Positive Controls: SNAT4 (m2): 293T Lysate: sc-123681 or mouse liver extract: sc-2256.

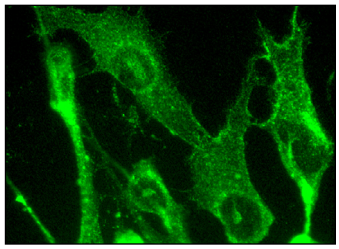
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SNAT4 (H-9): sc-376664. Western blot analysis of SNAT4 expression in non-transfected: sc-117752 (**A**) and mouse SNAT4 transfected: sc-123681 (**B**) 293T whole cell lysates.



SNAT4 (H-9): sc-376664. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Matoba, S., et al. 2019. Paternal knockout of Slc38a4/SNAT4 causes placental hypoplasia associated with intrauterine growth restriction in mice. Proc. Natl. Acad. Sci. USA 116: 21047-21053.
2. Xie, Z., et al. 2022. Loss of Slc38a4 imprinting is a major cause of mouse placenta hyperplasia in somatic cell nuclear transferred embryos at late gestation. Cell Rep. 38: 110407.

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 for detailed protocols and support products.