

SLC6A19 (N-19): sc-160811

BACKGROUND

SLC6A19 (solute carrier family 6 (neurotransmitter transporter), member 19), also known as sodium-dependent neutral amino acid transporter B(0)AT1 or system B(0) neutral amino acid transporter AT1, is a 634 amino acid multi-pass membrane protein that functions as a transporter responsible for mediating the resorption of neutral amino acids across the apical membrane of renal and intestinal epithelial cells. A member of the sodium:neurotransmitter symporter (SNF) family, SLC6A19 has the ability to bind all large neutral non-aromatic L-amino acids but prefers leucine as its substrate, which it uptakes in a sodium-dependent manner. Expressed in skin, kidney and intestine, SLC6A19 distribution is most prominent in renal cortex, proximal tubules and villus enterocytes. Mutations in the gene encoding SLC6A19 are linked to the development of Hartnup disorder, an autosomal recessive defect characterized by cerebellar ataxia, psychosis and rashes.

REFERENCES

- Bröer, A., et al. 2004. Molecular cloning of mouse amino acid transport system B0, a neutral amino acid transporter related to Hartnup disorder. *J. Biol. Chem.* 279: 24467-24476.
- Kleta, R., et al. 2004. Mutations in SLC6A19, encoding B0AT1, cause Hartnup disorder. *Nat. Genet.* 36: 999-1002.
- Höglund, P.J., et al. 2005. The repertoire of solute carriers of family 6: identification of new human and rodent genes. *Biochem. Biophys. Res. Commun.* 336: 175-189.
- Böhmer, C., et al. 2005. Characterization of mouse amino acid transporter B0AT1 (slc6a19). *Biochem. J.* 389: 745-751.
- Camargo, S.M., et al. 2005. Steady-state kinetic characterization of the mouse B(0)AT1 sodium-dependent neutral amino acid transporter. *Pflugers Arch.* 451: 338-348.
- Romeo, E., et al. 2006. Luminal kidney and intestine SLC6 amino acid transporters of BOAT-cluster and their tissue distribution in *Mus musculus*. *Am. J. Physiol. Renal Physiol.* 290: F376-F383.

CHROMOSOMAL LOCATION

Genetic locus: SLC6A19 (human) mapping to 5p15.33.

SOURCE

SLC6A19 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of SLC6A19 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.

Blocking peptide available for competition studies, sc-160811 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SLC6A19 (N-19) is recommended for detection of SLC6A19 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); non cross-reactive with other SLC6A family members.

Suitable for use as control antibody for SLC6A19 siRNA (h): sc-91732, SLC6A19 shRNA Plasmid (h): sc-91732-SH and SLC6A19 shRNA (h) Lentiviral Particles: sc-91732-V.

Molecular Weight (predicted) of SLC6A19: 71 kDa.

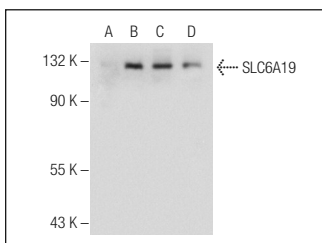
Molecular Weight (observed) of SLC6A19: 132 kDa.

Positive Controls: SLC6A19 (h): 293T Lysate: sc-129783, ES-2 cell lysate: sc-24674 or PCA-3 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SLC6A19 (N-19): sc-160811. Western blot analysis of SLC6A19 expression in non-transfected 293T: sc-117752 (A), human SLC6A19 transfected 293T: sc-129783 (B), ES-2 (C) and PC-3 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Yang, H., et al. 2012. Impacts of birth weight on plasma, liver and skeletal muscle neutral amino acid profiles and intestinal amino acid transporters in suckling Huanjiang mini-piglets. *PLoS ONE* 7: e50921.

STORAGE

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