

SLC6A19 (4F11): sc-293399

BACKGROUND

SLC6A19 (solute carrier family 6 (neurotransmitter transporter), member 19), also known as sodium-dependent neutral amino acid transporter B⁰AT1 or system B⁰ 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 B⁰AT1 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 B⁰AT-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 (4F11) is a mouse monoclonal antibody raised against amino acids 326-414 of SLC6A19 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SLC6A19 (4F11) 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

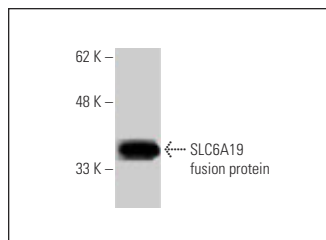
Molecular Weight (predicted) of SLC6A19: 71 kDa.

Molecular Weight (observed) of SLC6A19: 132 kDa.

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).

DATA



SLC6A19 (4F11): sc-293399. Western blot analysis of human recombinant SLC6A19 fusion protein.

RESEARCH USE

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

PROTOCOLS

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