

# SLC6A19 (Y-15): sc-160813

## 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

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- 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 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; Slc6a19 (mouse) mapping to 13 C1.

## SOURCE

SLC6A19 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of SLC6A19 of mouse 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-160813 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SLC6A19 (Y-15) is recommended for detection of SLC6A19 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other SLC6A family members.

SLC6A19 (Y-15) is also recommended for detection of SLC6A19 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SLC6A19 siRNA (h): sc-91732, SLC6A19 siRNA (m): sc-153576, SLC6A19 shRNA Plasmid (h): sc-91732-SH, SLC6A19 shRNA Plasmid (m): sc-153576-SH, SLC6A19 shRNA (h) Lentiviral Particles: sc-91732-V and SLC6A19 shRNA (m) Lentiviral Particles: sc-153576-V.

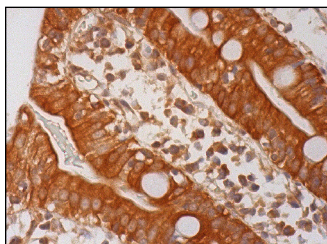
Molecular Weight (predicted) of SLC6A19: 71 kDa.

Molecular Weight (observed) of SLC6A19: 132 kDa.

## 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



SLC6A19 (Y-15): sc-160813. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing membrane and cytoplasmic staining of glandular cells.

## STORAGE

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

## RESEARCH USE

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