

SLC5A8 (N-14): sc-34188

BACKGROUND

SLC5A8, a member of the sodium/glucose co-transporter gene family, mediates the transport of a variety of monocarboxylates, including short-chain fatty acids, lactate, nicotinate and pyruvate. It may also transport iodide. SLC5A8 is expressed in colon, ileum, kidney, thyroid gland and brain. Cancers detected in these tissues may involve the silencing of the SLC5A8 gene, which is associated with the hypermethylation of CpG islands in exon 1. Also, acetylation of Histone H3 in the 5' region of the gene correlates directly with SLC5A8 expression and inversely with DNA methylation, suggesting its involvement in silencing SLC5A8 expression in cancers. The gene encoding human SLC5A8 maps to chromosome 12q23.1.

REFERENCES

1. Coady, M.J., et al. 2004. The human tumour suppressor gene SLC5A8 expresses a Na⁺-monocarboxylate cotransporter. *J. Physiol.* 557: 719-731.
2. Gopal, E., et al. 2004. Expression of SLC5A8 in kidney and its role in Na⁺-coupled transport of lactate. *J. Biol. Chem.* 279: 44522-44532.
3. Ueno, M., et al. 2004. Aberrant methylation and Histone deacetylation associated with silencing of SLC5A8 in gastric cancer. *Tumour Biol.* 25: 134-140.
4. Ganapathy, V., et al. 2005. Biological functions of SLC5A8, a candidate tumour suppressor. *Biochem. Soc. Trans.* 33: 237-240.
5. Gopal, E., et al. 2005. Sodium-coupled and electrogenic transport of B-complex vitamin nicotinic acid by SLC5A8, a member of the Na⁺/glucose co-transporter gene family. *Biochem. J.* 388: 309-316.
6. Hong, C., et al. 2005. Shared epigenetic mechanisms in human and mouse gliomas inactivate expression of the growth suppressor SLC5A8. *Cancer Res.* 65: 3617-3623.
7. Porra, V., et al. 2005. Silencing of the tumor suppressor gene SLC5A8 is associated with BRAF mutations in classical papillary thyroid carcinomas. *J. Clin. Endocrinol. Metab.* 90: 3028-3035.

CHROMOSOMAL LOCATION

Genetic locus: SLC5A8 (human) mapping to 12q23.1; Slc5a8 (mouse) mapping to 10 C1.

SOURCE

SLC5A8 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SLC5A8 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-34188 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

SLC5A8 (N-14) is recommended for detection of SLC5A8 of human and, to a lesser extent, mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SLC5A8 (N-14) is also recommended for detection of SLC5A8 in additional species, including porcine.

Suitable for use as control antibody for SLC5A8 siRNA (h): sc-45289, SLC5A8 siRNA (m): sc-45290, SLC5A8 shRNA Plasmid (h): sc-45289-SH, SLC5A8 shRNA Plasmid (m): sc-45290-SH, SLC5A8 shRNA (h) Lentiviral Particles: sc-45289-V and SLC5A8 shRNA (m) Lentiviral Particles: sc-45290-V.

Molecular Weight of SLC5A8: 67 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.

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.