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SLC5A1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP14529b

Specification

SLC5A1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P13866

SLC5A1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 6523

Other Names
Sodium/glucose cotransporter 1, Na(+)/glucose cotransporter 1, High affinity sodium-glucose cotransporter, Solute carrier family 5 member 1, SLC5A1, NAGT, SGLT1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SLC5A1 Antibody (C-term) Blocking Peptide - Protein Information

Name SLC5A1 {ECO:0000303|PubMed:28974690, ECO:0000312|HGNC:HGNC:11036}

Function
Electrogenic Na(+)-coupled sugar simporter that actively transports D-glucose or D-galactose at the plasma membrane, with a Na(+) to sugar coupling ratio of 2:1. Transporter activity is driven by a transmembrane Na(+) electrochemical gradient set by the Na(+)/K(+) pump (PubMed:20980548, PubMed:35077764, PubMed:8563765, PubMed:34880492). Has a primary role in the transport of dietary monosaccharides from enterocytes to blood. Responsible for the absorption of D-glucose or D-galactose across the apical brush-border membrane of enterocytes, whereas basolateral exit is provided by GLUT2. Additionally, functions as a D-glucose sensor in enteroendocrine cells, triggering the secretion of the incretins GCG and GIP that control food intake and energy homeostasis (PubMed:8563765) (By similarity). Together with SGLT2, functions in reabsorption of D-glucose from glomerular filtrate, playing a nonredundant role in the S3 segment of the proximal tubules (By similarity). Transports D-glucose into endometrial epithelial cells, controlling glycogen synthesis and nutritional support for the embryo as well as the decidual transformation of endometrium prior to conception (PubMed:<a href="http://www.uniprot.org/citations/28974690"

target="_blank">28974690). Acts as a water channel enabling passive water transport across the plasma membrane in response to the osmotic gradient created upon sugar and Na(+) uptake. Has high water conductivity, comparable to aquaporins, and therefore is expected to play an important role in transepithelial water permeability, especially in the small intestine.

Cellular Location
Apical cell membrane; Multi-pass membrane protein

Tissue Location
Expressed in intestine (PubMed:2490366). Expressed in endometrial cells (PubMed:28974690).

SLC5A1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

SLC5A1 Antibody (C-term) Blocking Peptide - Images

SLC5A1 Antibody (C-term) Blocking Peptide - Background

This gene encodes a member of the sodium-dependent glucosetransporter (SGLT) family. The encoded integral membrane protein isthe primary mediator of dietary glucose and galactose uptake fromthe intestinal lumen. Mutations in this gene have been associatedwith glucose-galactose malabsorption.

SLC5A1 Antibody (C-term) Blocking Peptide - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Sopjani, M., et al. Mol. Membr. Biol. 27 (2-3), 137-144 (2010) :Longpre, J.P., et al. Biophys. J. 98(2):231-239(2010)Yokoyama, K., et al. Nephron Clin Pract 115 (4), C237-C243 (2010) :Banerjee, S.K., et al. Cardiovasc. Res. 84(1):111-118(2009)