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SLC5A1 / SGLT1 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS12642

Specification

SLC5A1 / SGLT1 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P13866
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**73kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A**

SLC5A1 / SGLT1 Antibody - 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

Target/Specificity
The antibody detects 73 kD SGLT-1 from human samples and in a lesser extent from mouse and rat samples. A ~50 kD cleavage fragment can also be detected in Jurkat cell lysate.

Reconstitution & Storage
+4°C or -20°C, Avoid repeated freezing and thawing.

Precautions
SLC5A1 / SGLT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SLC5A1 / SGLT1 Antibody - Protein Information

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

Function
Electrogenic Na(+)-coupled sugar symporter 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:34880492, PubMed:35077764, PubMed:8563765, PubMed:37217492). 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 (By similarity) (PubMed:8563765). 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: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).

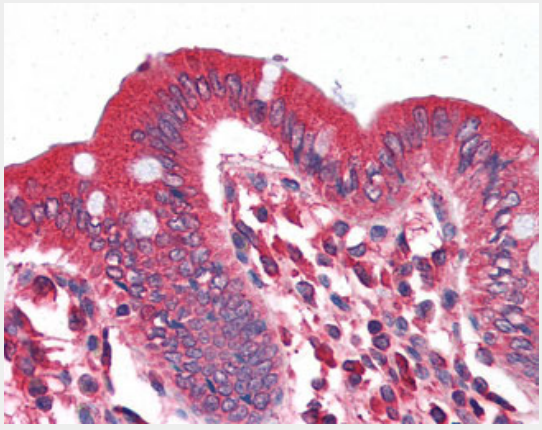
Volume
250 µl

SLC5A1 / SGLT1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SLC5A1 / SGLT1 Antibody - Images



Anti-SLC5A1 / SGLT1 antibody IHC of human colon.

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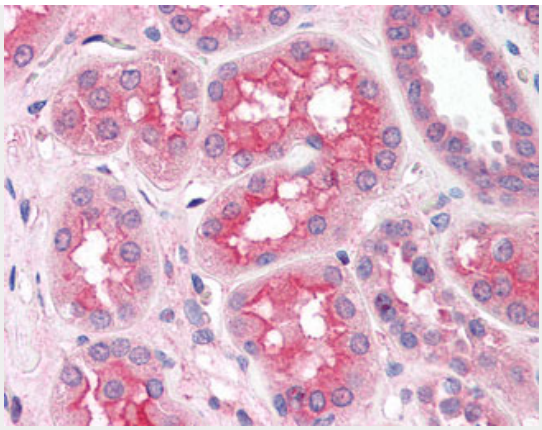

Anti-SLC5A1 / SGLT1 antibody IHC of human kidney.

Western blot of SGLT-1 expression in Jurkat cell lysate

SLC5A1 / SGLT1 Antibody - Background

Actively transports glucose into cells by Na(+) cotransport with a Na(+) to glucose coupling ratio of 2:1. Efficient substrate transport in mammalian kidney is provided by the concerted action of a low affinity high capacity and a high affinity low capacity Na(+)/glucose cotransporter arranged in series along kidney proximal tubules.

SLC5A1 / SGLT1 Antibody - References

Hediger M.A.,et al.Proc. Natl. Acad. Sci. U.S.A. 86:5748-5752(1989).
Turk E.,et al.J. Biol. Chem. 269:15204-15209(1994).
Collins J.E.,et al.Genome Biol. 5:R84.1-R84.11(2004).
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