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SGLT-1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10544

Specification

SGLT-1 Antibody - Product Information

Application	**WB**
Primary Accession	P13866
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**73498**

SGLT-1 Antibody - Additional Information

Gene ID 6523

Application & Usage	**Western blot analysis (0.5-4 µg/ml). However, the optimal conditions should be determined individually. Jurkat cell lysate can be used as a positive control. The antibody detects 73 kDa SGLT-1 from human samples and in a lesser extent from mouse and rat samples. A ~50 kDa cleavage fragment can also be detected in Jurkat cell lysate.**

Other Names
SGLT 1 , SLC5A1 , Sodium glucose cotransporter 1 , D22S675 , NAGT

Target/Specificity
SGLT-1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) protein A affinity purified rabbit polyclonal SGLT-1 antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
SGLT-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SGLT-1 Antibody - 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: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).

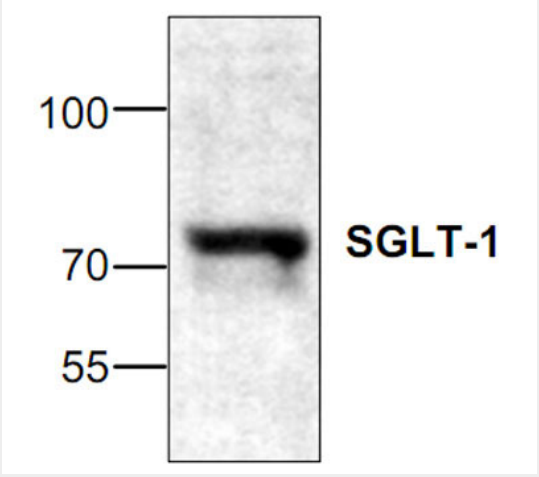
SGLT-1 Antibody - Protocols

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

SGLT-1 Antibody - Images

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Western blot analysis of SGLT-1 expression in Jurkat cell lysate

SGLT-1 Antibody - Background

Glucose transporters are integral membrane proteins that mediate the transport of glucose and structurally related substances across cellular membranes. Two families of glucose transporter have been identified: the facilitated diffusion glucose transporter family (GLUT family), also known as 'uniporters,' and the sodium dependent glucose transporter family (SGLT family), also known as 'cotransporters' or 'symporters'. The SGLT1 gene encodes a protein that is involved in the active transport of glucose and galactose into eukaryotic and some prokaryotic cells.