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Anti-SGLT1 Antibody

Catalog # ABO11554

Product Information

Application	WB
Primary Accession	P13866
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Sodium/glucose cotransporter 1(SLC5A1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	73498
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Membrane; Multi-pass membrane protein.
Tissue Specificity	Expressed mainly in intestine and kidney.
Source	Eukaryota
Protein Name	Sodium/glucose cotransporter 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of mouse SGLT1(620-635aa KMTKEEEEAMKMKMTD), different from the related rat sequence by one amino acid, and from the related human sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

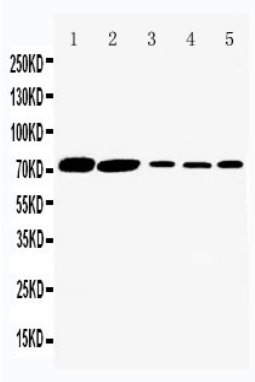
Name	SLC5A1 {ECO:0000303|PubMed:28974690, ECO:0000312|HGNC:HGNC:11036}
Function	Electrogenic Na(+)-coupled sugar symporter that actively transports D-glucose or D-galactose at the plasma membrane, with a Na(+) to sugar coupling ratio of 2:1. Transporter activity is driven by a transmembrane Na(+) electrochemical 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).

Background

Sodium/glucose cotransporter 1(SLC5A1), also known as NAGT or SGLT1 is a protein that in humans is encoded by the SLC5A1 gene. This gene is mapped to 22q12.3. This gene encodes a member of the sodium-dependent glucose transporter(SGLT) family. The encoded integral membrane protein is the primary mediator of dietary glucose and galactose uptake from the intestinal lumen. Mutations in this gene have been associated with glucose-galactose malabsorption. Multiple transcript variants encoding different isoforms have been found for this gene.

Images

Anti-SGLT1 antibody, ABO11554, Western blottingLane 1: Rat Kidney Tissue LysateLane 2: Rat Heart Tissue LysateLane 3: HELA Cell LysateLane 4: SW620 Cell LysateLane 5: COLO320 Cell Lysate



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