abcam

ab58298

Anti-SGLT2 antibody [3G8]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human SLC5A2 aa 200-300. The exact immunogen used to generate this antibody is proprietary information. Database link P31639
Clone number	3G8
Purity	Tissue culture supernatant
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant fragment - Human
Dilution info	-
Notes	This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein.

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information SLC5A2

Function	Electrogenic Na(+)-coupled sugar symporter that actively transports D-glucose at the plasma membrane, with a Na(+) to sugar coupling ratio of 1:1 (PubMed:20980548, PubMed:28592437, PubMed:34880493, PubMed:37217492, PubMed:38057552). Transporter activity is driven by a transmembrane Na(+) electrochemical gradient set by the Na(+)/K(+) pump (PubMed:20980548, PubMed:28592437, PubMed:34880493). Unlike SLC5A1/SGLT1, requires the auxiliary protein PDZK1IP1/MAP17 for full transporter activity (PubMed:37217492). Has a primary role in D-glucose reabsorption from glomerular filtrate across the brush border of the early proximal tubules of the kidney (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

This product was changed from ascites to tissue culture supernatant on 12/3/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	SGLT2 also known as sodium-glucose co-transporter 2 is a protein responsible for reabsorbing glucose in the renal proximal convoluted tubule. It carries glucose along with sodium ions across cell membranes enabling glucose reabsorption from the glomerular filtrate back into the bloodstream a process essential for the maintenance of glucose homeostasis. This protein has a molecular weight of approximately 75 kDa. SGLT2 is mostly expressed in the renal epithelial cells located within the kidney's proximal tubule.
Biological function summary	Sodium-glucose co-transporter 2 plays a central role in renal glucose reabsorption. It operates as part of a vital mechanism in the kidney where it engages in the active transport of glucose against its concentration gradient facilitated by the sodium gradient produced by the Na^+/K^+-ATPase pump. This transporter ensures minimal loss of glucose in urine maintaining energy balance and blood glucose levels.
Pathways	SGLT2 is involved in glucose and sodium transport pathways critical for glycolytic and gluconeogenic processes. These pathways are key for energy production and glucose homeostasis. It works closely with proteins like GLUT2 which operates in the basolateral membrane of renal tubular cells to further transfer reabsorbed glucose into the bloodstream. Together these proteins form a tightly regulated network that maintains normal blood glucose levels.
Associated diseases and disorders	SGLT2 has a significant impact on diabetes and cardiovascular disease. Inhibitors of SGLT2 are effective treatments for type 2 diabetes by preventing glucose reabsorption leading to increased glucose excretion through urine and improved glycemic control. The glucose-lowering effect also contributes to reducing risks associated with cardiovascular diseases. In this context SGLT2 interacts with protein targets like insulin where its modulation offers therapeutic efficacy in managing hyperglycemia.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

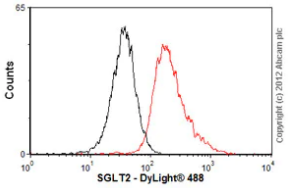
We do not recommend this combination. It is not covered by our product promise.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - Anti-SGLT2 antibody [3G8] (ab58298)

SGLT2 Flow Cytometry staining using mouse Anti-SGLT2 antibody

Overlay histogram showing HEK293 cells stained with ab58298 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab58298, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.
This image was generated using the ascites version of the product.

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