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MCT1 (SLC16A1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2753b

Product Information

Application	WB, E
Primary Accession	P53985
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15099
Calculated MW	53944
Antigen Region	430-460

Additional Information

Gene ID	6566
Other Names	Monocarboxylate transporter 1, MCT 1, Solute carrier family 16 member 1, SLC16A1, MCT1
Target/Specificity	This MCT1 (SLC16A1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 430-460 amino acids from the C-terminal region of human MCT1 (SLC16A1).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MCT1 (SLC16A1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC16A1 (HGNC:10922)
Synonyms	MCT1
Function	Bidirectional proton-coupled monocarboxylate transporter

	(PubMed:12946269, PubMed:32946811, PubMed:33333023). Catalyzes the rapid transport across the plasma membrane of many monocarboxylates such as lactate, pyruvate, acetate and the ketone bodies acetoacetate and beta-hydroxybutyrate, and thus contributes to the maintenance of intracellular pH (PubMed:12946269, PubMed:33333023). The transport direction is determined by the proton motive force and the concentration gradient of the substrate monocarboxylate. MCT1 is a major lactate exporter (By similarity). Plays a role in cellular responses to a high-fat diet by modulating the cellular levels of lactate and pyruvate that contribute to the regulation of central metabolic pathways and insulin secretion, with concomitant effects on plasma insulin levels and blood glucose homeostasis (By similarity). Facilitates the protonated monocarboxylate form of succinate export, that its transient protonation upon muscle cell acidification in exercising muscle and ischemic heart (PubMed:32946811). Functions via alternate outward- and inward-open conformation states. Protonation and deprotonation of 309-Asp is essential for the conformational transition (PubMed:33333023).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P53987}; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P53987}. Note=Expression at the cell surface requires the ancillary proteins BSG and EMB. Binds preferentially to BSG.
Tissue Location	Widely expressed (PubMed:12115955, PubMed:15505343, PubMed:15901598). Detected in heart and in blood lymphocytes and monocytes (at protein level) (PubMed:15505343)

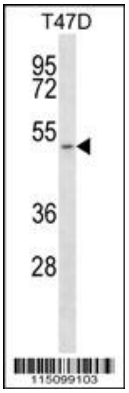
Background

SLC16A1 is a monocarboxylate transporter (MCT1) that mediates the movement of lactate and pyruvate across cell membranes import and export of these substrates by tissues such as erythrocytes, muscle, intestine, and kidney are ascribed largely to the action of a proton-coupled MCT (Garcia et al., 1994 [PubMed 8124722]).

References

Pinheiro,C., Virchows Arch. 452 (2), 139-146 (2008)
Otonkoski,T., Am. J. Hum. Genet. 81 (3), 467-474 (2007)
Martin-Venegas,R., J. Nutr. 137 (1), 49-54 (2007)

Images



Western blot analysis of anti-SLC16A1 Antibody (C-term) (Cat.#AP2753b) in T47D cell line lysates (35ug/lane).SLC16A1(arrow) was detected using the purified Pab.

Citations

- Influence of high glucose state on bromopyruvate-induced cytotoxity by human colon cancer cell lines.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.