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MCT1 (SLC16A1) Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2753c

Specification

MCT1 (SLC16A1) Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	P53985
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**53944**
Antigen Region	**200-228**

MCT1 (SLC16A1) Antibody (Center) - 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 200-228 amino acids from the Central region of human MCT1 (SLC16A1).

Dilution
WB~~1:1000

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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

MCT1 (SLC16A1) Antibody (Center) - Protein Information

Name SLC16A1 (HGNC:10922)

Synonyms MCT1

Function Bidirectional proton-coupled monocarboxylate transporter (PubMed:12946269, PubMed:33333023, PubMed:32946811). 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:15901598, PubMed:15505343, PubMed:12115955). Detected in heart and in blood lymphocytes and monocytes (at protein level) (PubMed:15505343)

MCT1 (SLC16A1) Antibody (Center) - 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

MCT1 (SLC16A1) Antibody (Center) - Images

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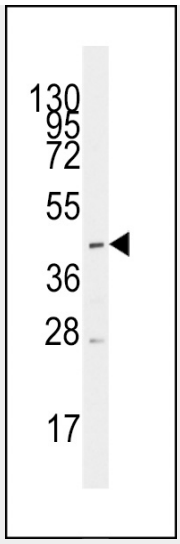

Western blot analysis of anti-SLC16A1 Antibody (Center) (Cat.#AP2753c) in CEM cell line lysates (35ug/lane).SLC16A1 (arrow) was detected using the purified Pab.

MCT1 (SLC16A1) Antibody (Center) - 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]).

MCT1 (SLC16A1) Antibody (Center) - 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)