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Anti-MCT1 Reference Antibody (Immunometabolism patent anti-MCT1)

Catalog # APR11429

Product Information

Application	Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA
Primary Accession	P53985
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG1-mut
Calculated MW	53944

Additional Information

Target/Specificity	MCT1
Expression system	CHO

Protein Information

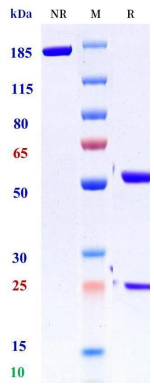
Name	SLC16A1 (HGNC:10922)
Synonyms	MCT1
Function	Bidirectional proton-coupled monocarboxylate transporter (PubMed:12946269, PubMed:32946811, PubMed:33333023). Catalyzes the rapid transport across the plasma membrane of many monocarboxylates such as lactate, pyruvate, acetate and the ketone bodies acetoacetate 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.

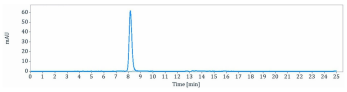
Tissue Location

Widely expressed (PubMed:12115955, PubMed:15505343, PubMed:15901598). Detected in heart and in blood lymphocytes and monocytes (at protein level) (PubMed:15505343)

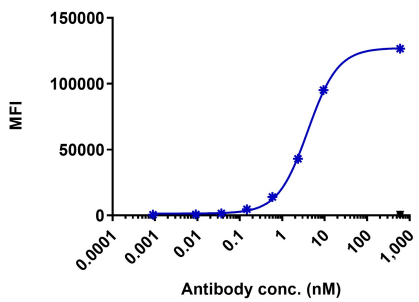
Images



Anti-MCT1 Reference Antibody (Immunometabolism patent anti-MCT1) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-MCT1 Reference Antibody (Immunometabolism patent anti-MCT1) is 100%, determined by SEC-HPLC.



PLVX-puro-_Hu_MCT1 cell line were stained with Immunometabolism patent anti-MCT1 and negative control protein respectively, washed and then followed by PE and analyzed with FACS, with the EC50 is 4.01 nM.

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