10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Monocarboxylic Acid Transporter 1 Antibody

Catalog # ABO11497

Specification

Anti-Monocarboxylic Acid Transporter 1 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P53985
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Monocarboxylate transporter 1(SLC16A1) detection. Tested with WB, IHC-P in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Monocarboxylic Acid Transporter 1 Antibody - Additional Information

Gene ID 6566

Other Names
Monocarboxylate transporter 1, MCT 1, Solute carrier family 16 member 1, SLC16A1, MCT1

Calculated MW
53944 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cell membrane ; Multi- pass membrane protein .

Tissue Specificity
Detected in heart and in blood lymphocytes and monocytes (at protein level). Widely expressed. .

Protein Name
Monocarboxylate transporter 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 in the middle region of human Monocarboxylic acid transporter 1(236-254aa RHPKQEKRSVFQTINQFLD).

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.

Sequence Similarities
Belongs to the major facilitator superfamily. Monocarboxylate porter (TC 2.A.1.13) family.

Anti-Monocarboxylic Acid Transporter 1 Antibody - 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)

Anti-Monocarboxylic Acid Transporter 1 Antibody - Protocols

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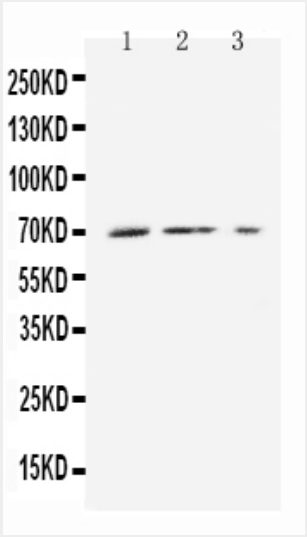
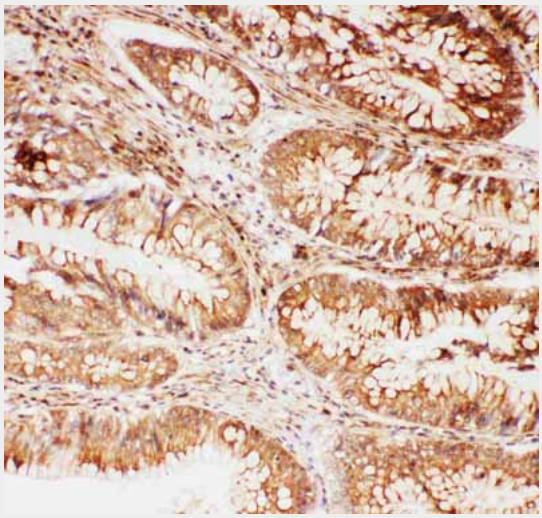
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Monocarboxylic Acid Transporter 1 Antibody - Images



Anti-Monocarboxylic acid transporter 1 antibody, ABO11497, Western blottingLane 1: COLO320 Cell LysateLane 2: SKOV Cell LysateLane 3: A549 Cell Lysate



Anti-Monocarboxylic acid transporter 1 antibody, ABO11497, IHC(P)IHC(P): Human Rectal Cancer Tissue

Anti-Monocarboxylic Acid Transporter 1 Antibody - Background

Monocarboxylate transporter 1, also called SLC16A1 or MCT1 is a protein that in humans is encoded by the SLC16A1 gene. This gene is mapped to 1p13.2. This gene acts as Proton-linked

monocarboxylate transporter. It catalyzes the movement of many monocarboxylates, such as lactate and pyruvate, across the plasma membrane. Mutations in this gene are associated with erythrocyte lactate transporter defect. Alternatively spliced transcript variants have been found for this gene.