

Anti-MCT1 Antibody [JE41-72]

HA722556



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB
Molecular Wt:	Predicted band size: 54 kDa
Clone number:	JE41-72

Description:	Monocarboxylate transporter 1 is a ubiquitous protein that in humans is encoded by the SLC16A1 gene (also known as MCT1). It is a proton coupled monocarboxylate transporter. Detailed kinetic analysis of monocarboxylate transport in erythrocytes revealed that MCT1 operates through an ordered mechanism. MCT1 has a substrate binding site open to the extracellular matrix which binds a proton first followed by the lactate anion. The protein then undergoes a conformational change to a new 'closed' conformation that exposes both the proton and lactate to the opposite surface of the membrane where they are released, lactate first and then the proton. For net transport of lactic acid, the rate-limiting step is the return of MCT1 without bound substrate to the open conformation. For this reason, exchange of one monocarboxylate inside the cell with another outside is considerably faster than net transport of a monocarboxylate across the membrane. MCT1 can be upregulated by PPAR- α , Nrf2, and AMPK.
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Immunogen:	Synthetic peptide within human MCT1 aa 444-493 / 500.
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Positive control:	HeLa cell lysate, HepG2 cell lysate, Jurkat cell lysate, 293T cell lysate, BxPC-3 cell lysate, AGS cell lysate.
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Subcellular location:	Cell membrane, Basolateral cell membrane, Apical cell membrane.
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Database links:	SwissProt: P53985 Human
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Recommended Dilutions:	
WB	1:1,000

Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
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Storage Instruction:	Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.
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Purity:	Protein A affinity purified.
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Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

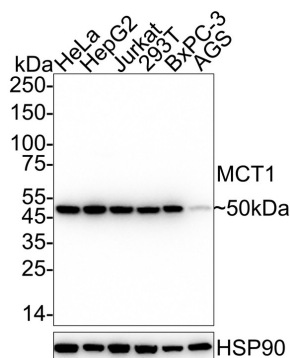
Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Western blot analysis of MCT1 on different lysates with Rabbit anti-MCT1 antibody (HA722556) at 1/1,000 dilution.



Lane 1: HeLa cell lysate
 Lane 2: HepG2 cell lysate
 Lane 3: Jurkat cell lysate
 Lane 4: 293T cell lysate
 Lane 5: BxPC-3 cell lysate
 Lane 6: AGS cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 54 kDa

Observed band size: 50 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722556) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Hadjihambi A et al. Partial MCT1 invalidation protects against diet-induced non-alcoholic fatty liver disease and the associated brain dysfunction. J Hepatol. 2023 Jan
2. She X et al. SETDB1 Methylates MCT1 Promoting Tumor Progression by Enhancing the Lactate Shuttle. Adv Sci (Weinh). 2023 Oct

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