

# MCT2 (M-17): sc-14926

## BACKGROUND

Monocarboxylates, such as lactate and pyruvate, play an integral role in cellular metabolism. Lactic acid is produced in large quantities as a result of glycolysis, which provides the majority of ATP to cells under normal physiological conditions. However, accumulation of lactic acid leads to a decrease in intracellular pH and cessation of glycolysis. In order for glycolysis to continue at a high rate, lactic acid must be transported out of the cell. This transport process is carried out by a family of monocarboxylate transporters (MCTs), which function as proton symports and are stereoselective for L-lactate. The MCT family consists of at least 8 members, MCT1-8, which contain between 10-12 transmembrane-helical (TM) domains, with the amino and carboxy termini located in the cytoplasm. MCT1 is widely expressed and is the major form of MCT in tumor cells and erythrocytes. MCT2 is highly expressed in liver and testis, while MCT3 and MCT4 are predominantly expressed in skeletal muscle.

## CHROMOSOMAL LOCATION

Genetic locus: Slc16a7 (mouse) mapping to 10 D3.

## SOURCE

MCT2 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MCT2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14926 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MCT2 (M-17) is recommended for detection of MCT2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MCT2 siRNA (m): sc-40116, MCT2 shRNA Plasmid (m): sc-40116-SH and MCT2 shRNA (m) Lentiviral Particles: sc-40116-V.

Molecular Weight of MCT2: 40 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or mouse testis extract: sc-2405.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

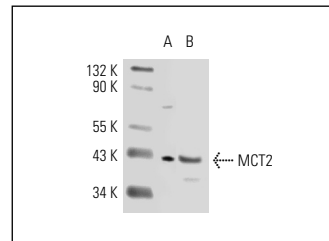
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



MCT2 (M-17): sc-14926. Western blot analysis of MCT2 expression in mouse testis tissue extract (A) and NIH/3T3 whole cell lysate (B).

## SELECT PRODUCT CITATIONS

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- Mannowetz, N., et al. 2012. Basigin interacts with both MCT1 and MCT2 in murine spermatozoa. *J. Cell. Physiol.* 227: 2154-2162.
- Alvarez, Z., et al. 2013. The effect of the composition of PLA films and lactate release on glial and neuronal maturation and the maintenance of the neuronal progenitor niche. *Biomaterials* 34: 2221-2233.


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