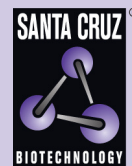


MCT11 (G-4): sc-515145



The Power to Question

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. Proteins belonging to the MCT family contain between 10-12 transmembrane-helical domains, with the amino- and carboxy-termini located in the cytoplasm. MCT11 (monocarboxylate transporter 11), also known as SLC16A11 (solute carrier family 16 member 11), is a 471 proton-linked monocarboxylate transporter that catalyzes the rapid transport of monocarboxylates across the plasma membrane.

REFERENCES

- Halestrap, A.P., et al. 1999. The proton-linked monocarboxylate transporter (MCT) family: structure, function and regulation. *Biochem. J.* 343: 281-299.
- Juel, C., et al. 1999. Lactate transport in skeletal muscle-role and regulation of the monocarboxylate transporter. *J. Physiol.* 517: 633-642.
- Enerson, B.E., et al. 2003. Molecular features, regulation, and function of monocarboxylate transporters: implications for drug delivery. *J. Pharm. Sci.* 92: 1531-1544.
- Halestrap, A.P., et al. 2004. The SLC16 gene family-from monocarboxylate transporters (MCTs) to aromatic amino acid transporters and beyond. *Pflugers Arch.* 447: 619-628.

CHROMOSOMAL LOCATION

Genetic locus: SLC16A11 (human) mapping to 17p13.1; Slc16a11 (mouse) mapping to 11 B3.

SOURCE

MCT11 (G-4) is a mouse monoclonal antibody raised against amino acids 263-309 mapping within an internal region of MCT11 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCT11 (G-4) is available conjugated to agarose (sc-515145 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515145 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515145 PE), fluorescein (sc-515145 FITC), Alexa Fluor® 488 (sc-515145 AF488), Alexa Fluor® 546 (sc-515145 AF546), Alexa Fluor® 594 (sc-515145 AF594) or Alexa Fluor® 647 (sc-515145 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515145 AF680) or Alexa Fluor® 790 (sc-515145 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MCT11 (G-4) is recommended for detection of MCT11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 MCT11 siRNA (h): sc-93713, MCT11 siRNA (m): sc-149324, MCT11 shRNA Plasmid (h): sc-93713-SH, MCT11 shRNA Plasmid (m): sc-149324-SH, MCT11 shRNA (h) Lentiviral Particles: sc-93713-V and MCT11 shRNA (m) Lentiviral Particles: sc-149324-V.

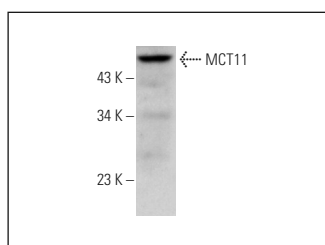
Molecular Weight of MCT11: 48 kDa.

Positive Controls: human liver extract: sc-363766 or rat liver extract: sc-2395.

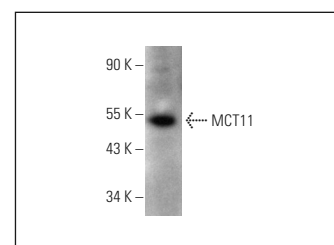
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MCT11 (G-4): sc-515145. Western blot analysis of MCT11 expression in rat liver tissue extract.



MCT11 (G-4): sc-515145. Western blot analysis of MCT11 expression in human liver tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.