

Monocarboxylate transporter 1

Cat.No. 356-0P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 483 to 493 from mouse MCT1 (UniProt Id: P53986)
Epitop	Epitop: AA 488 to 493 from mouse MCT1 (UniProt Id: P53986)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	356 003

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The proton-linked transport of monocarboxylates across the plasma membrane plays a critical role in the metabolism and pH regulation of most cells. Fourteen different monocarboxylic acid transporters (MCTs) have been identified, so far. Only four of them (MCT 1-4) have been shown to actively transport the monocarboxylates pyruvate and lactate across the cell membrane.

MCT 1, also referred to as **Slc16 a1**, and MCT 2 show differential expression in astrocyte subpopulations and blood vessels in the mammalian brain.

Selected General References

Deficiency in monocarboxylate transporter 1 (MCT1) in mice delays regeneration of peripheral nerves following sciatic nerve crush.

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Regulation of Mct1 by cAMP-dependent internalization in rat brain endothelial cells.

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Studies on the DIDS-binding site of monocarboxylate transporter 1 suggest a homology model of the open conformation and a plausible translocation cycle.

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The Journal of biological chemistry (2009) 284(30): 20011-21.

Expression of the monocarboxylate transporter MCT1 in the adult human brain cortex.

Chiry O, Pellerin L, Monnet-Tschudi F, Fishbein WN, Merezinskaya N, Magistretti PJ, Clarke S

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