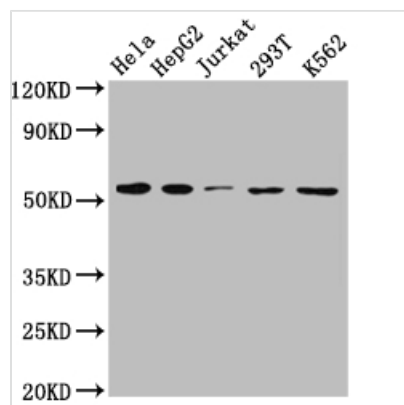




SLC16A1 Recombinant Monoclonal Antibody

Product Code	CSB-RA919798A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P53985
Immunogen	A synthesized peptide derived from human Monocarboxylic acid transporter 1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Proton-coupled monocarboxylate transporter. Catalyzes the rapid transport across the plasma membrane of many monocarboxylates such as lactate, pyruvate, branched-chain oxo acids derived from leucine, valine and isoleucine, and the ketone bodies acetoacetate, beta-hydroxybutyrate and acetate. Depending on the tissue and on circumstances, mediates the import or export of lactic acid and ketone bodies. Required for normal nutrient assimilation, increase of white adipose tissue and body weight gain when on a high-fat diet. Plays a role in cellular responses to a high-fat diet by modulating the cellular levels of lactate and pyruvate, small molecules that contribute to the regulation of central metabolic pathways and insulin secretion, with concomitant effects on plasma insulin levels and blood glucose homeostasis.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Metabolism; Signal transduction
Gene Names	SLC16A1
Clone No.	9D12
Image	



Western Blot

Positive WB detected in: HeLa whole cell lysate, HepG2 whole cell lysate, Jurkat whole cell lysate, 293T whole cell lysate, K562 whole cell lysate

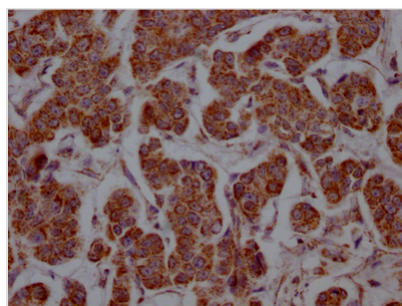
All lanes: MCT1 antibody at 1:1000

Secondary

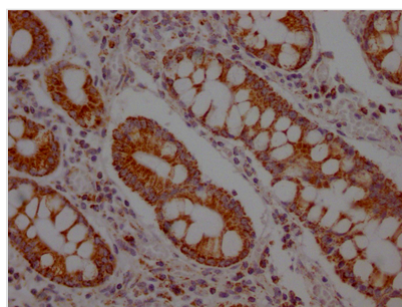
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 54, 47 kDa

Observed band size: 54 kDa



IHC image of CSB-RA919798A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA919798A0HU diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

To produce the SLC16A1 recombinant monoclonal antibody that detects human SLC16A1 protein, four steps are involved. First, the SLC16A1 monoclonal antibody gene is sequenced and then cloned into a plasmid vector. The recombinant vector is subsequently transfected into a host cell line. The next step is to purify the recombinant monoclonal antibody from the cell culture supernatant using affinity chromatography. The SLC16A1 monoclonal antibody originates from SLC16A1 antibody-producing hybridomas, and its production involves using a synthesized peptide derived from human SLC16A1 as the immunogen. The SLC16A1 recombinant monoclonal antibody is suitable for use in ELISA, WB, and IHC applications.

The SLC16A1 protein, also known as MCT1, is a transmembrane protein that is involved in the transport of lactate and other monocarboxylates across the plasma membrane. In cells, the SLC16A1 protein facilitates the transport of lactate produced by glycolysis out of the cell and into the extracellular space, where it can be taken up by other cells for use as an energy source or converted



back into glucose by the liver. In addition to lactate, SLC16A1 can transport other monocarboxylates, such as pyruvate and ketone bodies, depending on the metabolic demands of the cell. SLC16A1 has also been implicated in the regulation of cellular pH and the response to hypoxia.