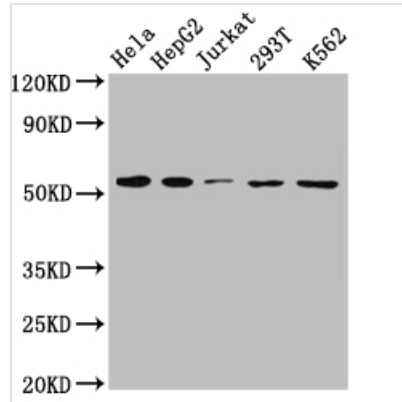




SLC16A1 Antibody

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	<p>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.</p>
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
Accession 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

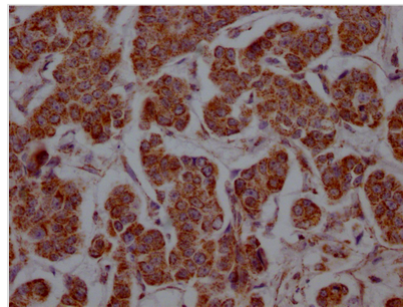
All lanes: MCT1 antibody at 1:1000

Secondary

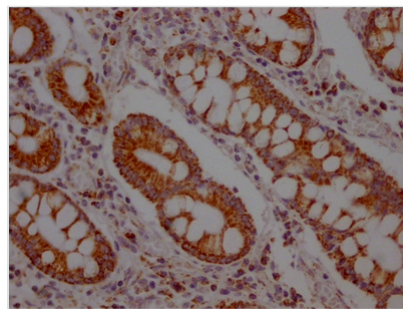
Goat polyclonal to rabbit IgG at 1/50000 dilution

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 Bond™ 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°C 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 Bond™ 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°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The proton-linked monocarboxylate transporter 1 (MCT1), encoded by the SLC16A1 gene, is a proton-dependent cotransporter/exchanger found on the apical membrane of cells. Many monocarboxylates, such as lactate and pyruvate, branched-chain oxoacids produced from leucine, valine, and isoleucine, and the ketone bodies acetoacetate, beta-hydroxybutyrate, and acetate, are transported across the cell membrane via MCT1. In an animal model, MCT1 mutation or reduced expression causes neuronal death due to axonal degeneration. Patients with recurrent ketoacidosis and hypoglycemia, a potentially fatal illness, were found to have inactivating recessive homozygous or heterozygous mutations in the SLC16A1 gene.

The first step in the preparation of recombinant SLC16A1 antibody is to obtain the SLC16A1 antibody gene. The heavy and light chain genes of the antibody were constructed into a plasma vector and then transfected into suspended mammalian cells transiently. After expression verification, cell supernatant was collected in expanded culture and purified recombinant SLC16A1 antibody was



obtained using Affinity-chromatography. This recombinant SLC16A1 antibody has been validated for the detection of SLC16A1 protein from Human in the ELISA, WB, IHC.