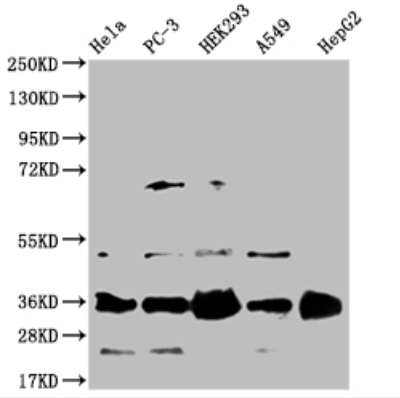
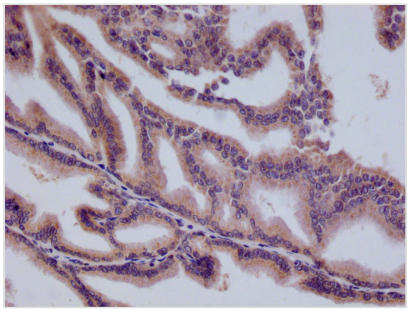
HMGCL Recombinant Monoclonal Antibody

Product Code	CSB-RA167089A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P35914
Immunogen	A synthesized peptide derived from human HMGCL
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, FC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200, FC:1:50-1:200
Relevance	Mitochondrial 3-hydroxymethyl-3-methylglutaryl-CoA lyase that catalyzes a cation-dependent cleavage of (S)-3-hydroxy-3-methylglutaryl-CoA into acetyl-CoA and acetoacetate, a key step in ketogenesis. Terminal step in leucine catabolism. Ketone bodies (beta-hydroxybutyrate, acetoacetate and acetone) are essential as an alternative source of energy to glucose, as lipid precursors and as regulators of metabolism. {ECO:0000269|PubMed:22847177, ECO:0000269|PubMed:22865860, ECO:0000269|PubMed:8566388}.
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	HMGCL
Clone No.	22H11

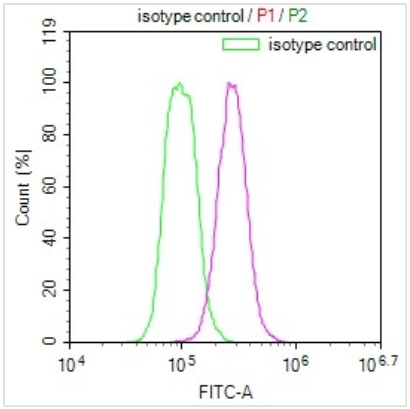
Image



Western Blot
Positive WB detected in: Hela whole cell lysate, PC-3 whole cell lysate, HEK293 whole cell lysate, A549 whole cell lysate, HepG2 whole cell lysate
All lanes: HMGCL antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 35, 27, 21 kDa
Observed band size: 35 kDa



IHC image of CSB-RA167089A0HU diluted at 1:100 and staining in paraffin-embedded human prostate tissue 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°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Overlay Peak curve showing Hela cells stained with CSB-RA167089A0HU (red line) at 1:100. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^{6}cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1ug/1*10^{6}cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The HMGCL recombinant monoclonal antibody was meticulously developed by CUSABIO through a well-defined process. Initially, B cells were isolated from the spleen of an immunized animal, with the synthesized peptide derived from human HMGCL used as the immunogen. Following that, RNA was extracted from the B cells and converted into cDNA through reverse transcription. Using the cDNA as a template, the gene encoding the HMGCL antibody was amplified with a degenerate primer and cloned into a vector. The recombinant vector was then introduced into host cells via transfection, enabling efficient expression of the HMGCL recombinant monoclonal antibodies. These antibodies were subsequently harvested from the cell culture supernatant and purified using affinity chromatography. The antibody has been tested for its specificity and reliability for the human HMGCL protein in four applications, including ELISA, WB, IHC, and FC.