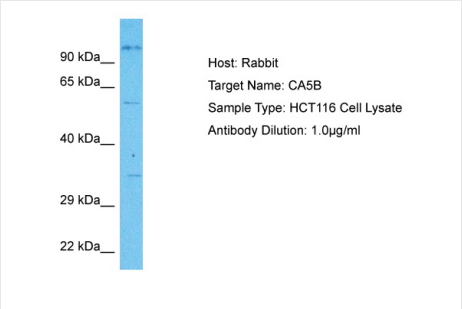
CA5B Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CA5B, Polyclonal Antibody
Full Product Name	CA5B Antibody - middle region
Product Gene Name	anti-CA5B antibody
Product Synonym Gene Name	CA-VB
Immunogen Sequence	Synthetic peptide located within the following region: TLLFTSEGEK EKRMVDNFRP LQPLMNRTVR SSFRHDYVLN VQAKPKPATS
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Purity/Purification	Affinity purified
Preparation and Storage	For short term use, store at 2-8 degree C up to 1 week. For long term storage, store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	CA5B peptide (MBS3246861) is used for blocking the activity of CA5B antibody (MBS3222171)
Molecular Weight	34 kDa
OMIM	300230
3D Structure	ModBase 3D Structure for Q9Y2D0
Immunogen	The immunogen is a synthetic peptide directed towards the middle region of human CA5B
Product Categories/Family for anti-CA5B antibody	Polyclonal; Cell Biology; Mitochondria
Applications Tested/Suitable for anti-CA5B antibody	Western Blot (WB)
Related Product Information for anti-CA5B antibody	Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA VB is localized in the mitochondria and shows the highest sequence similarity to the other mitochondrial CA, CA VA. It has a wider tissue distribution than CA VA, which is restricted to the liver. The differences in tissue distribution suggest that the two mitochondrial carbonic anhydrases evolved to assume different physiologic roles.
Other Notes	Small volumes of anti-CA5B antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CA5B purchase	MBS3222171 is an antibody targeting CA5B. Also known as CA5B Antibody - middle region. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-CA5B antibody
Host: RabbitTarget Name: CA5BSample Tissue: Human HCT116 Whole Cell lysatesAntibody Dilution: 1ug/ml

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CA5B. It may not necessarily be applicable to this product.

NCBI GI #	6005723
NCBI GeneID	11238
NCBI Accession #	NP_009151.1
UniProt Primary Accession #	Q9Y2D0
UniProt Related Accession #	Q9Y2D0
GenBank Nucleotide #	NM_007220.3
NCBI Official Full Name	carbonic anhydrase 5B, mitochondrial
NCBI Official Synonym Full Names	carbonic anhydrase 5B
NCBI Official Symbol	CA5B
NCBI Official Synonym Symbols	CAVB; CA-VB
UniProt Protein Name	Carbonic anhydrase 5B, mitochondrial
UniProt Synonym Protein Names	Carbonate dehydratase VB; Carbonic anhydrase VB
Protein Family	Carbonic anhydrase
UniProt Gene Name	CA5B
UniProt Synonym Gene Names	CA-VB
UniProt Entry Name	CAH5B_HUMAN
NCBI Protein Information	carbonic anhydrase 5B, mitochondrial
NCBI Summary for CA5B	Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. This gene encodes carbonic anhydrase 5B. CA5B, and the related CA5A gene, has its expression localized in the mitochondria though CA5B has a wider tissue distribution than CA5A, which is restricted to the liver, kidneys, and skeletal muscle. A carbonic anhydrase pseudogene (CA5BP1) is adjacent to the CA5B gene and these two loci produce CA5BP1-CA5B readthrough transcripts. [provided by RefSeq, Jan 2019]

UniProt Comments for CA5B	CA5B: Reversible hydration of carbon dioxide. Belongs to the alpha-carbonic anhydrase family. Protein type: Lyase; Energy Metabolism - nitrogen; EC 4.2.1.1; Mitochondrial Chromosomal Location of Human Ortholog: Xp21.1 Cellular Component: mitochondrion; mitochondrial matrix Molecular Function: carbonate dehydratase activity; zinc ion binding Biological Process: bicarbonate transport; one-carbon compound metabolic process
Research Articles on CA5B	**1.** In 10 of 96 patients, mutations in CA5A were identified on both alleles but none in CA5B. Exhibiting decreased enzyme activity or thermal stability, all CAVA mutations were proven to cause disease, whereas the three variants showed no relevant effect
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