

Rabbit anti-Human Carbonic Anhydrase VB Polyclonal Antibody | anti-CA5B antibody

Anti-Carbonic Anhydrase VB Antibody, Rabbit Polyclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA255558	Rabbit	Human	Immunoprecipitation, ELISA, Western Blot

PRODUCT SYNONYMS

Carbonic Anhydrase VB; Polyclonal Antibody; Anti-Carbonic Anhydrase VB Antibody; Rabbit Polyclonal; Carbonic Anhydrase VB/CA5B Antibody; Rabbit PAb; Antigen Affinity Purified; carbonic anhydrase VB; mitochondrial; Anti-CA-VB Antibody; Anti-MGC39962 Antibody; anti-CA5B antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human Carbonic Anhydrase VB/CA5B
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-CA5B antibody	IP (Immunoprecipitation), ELISA, WB (Western Blot)
Immunogen	Recombinant Human Carbonic Anhydrase VB/CA5B Protein
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with purified, recombinant Human Carbonic Anhydrase VB/CA5B (rh Carbonic Anhydrase VB/CA5B). Carbonic Anhydrase VB/CA5B specific IgG was purified by Human Carbonic Anhydrase VB/CA5B affinity chromatography.
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.

IMAGES



WB (Western Blot)

Anti-CA5B rabbit polyclonal antibody at 1:500 dilution. Lane A: Mouse liver tissue lysate. Lysates/proteins at 30 ug per lane. Secondary: Goat Anti-Rabbit IgG H&L (Dylight 800) at 1/10000 dilution. Developed using the Odyssey technique. Performed under reducing conditions. Predicted band size: 36 kDa. Observed band size: 38 kDa. (We are unsure as to the identity of these extra bands.)



IP (Immunoprecipitation)

CA5B was immunoprecipitated using: Lane A: 0.5 mg MCF-7 Whole Cell Lysate. 2 uL anti-CA5B rabbit polyclonal antibody and 15 uL of 50 % Protein G agarose. Primary antibody: Anti-CA5B rabbit polyclonal antibody, at 1:200 dilution. Secondary antibody: Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution. Developed using the Odyssey technique. Performed under reducing conditions. Predicted band size: 35 kDa. Observed band size: 35 kDa.

ADDITIONAL INFORMATION

Related Product Information for anti-CA5B antibody	Carbonic anhydrase 5B, also known as carbonate dehydratase VB, carbonic anhydrase VB, CA-VB and CA5B, is amember of the alpha-carbonic anhydrase family. The strongest expression of CA5B/CA-VB is in heart, pancreas, kidney, placenta, lung, and skeletal muscle. It is not expressed in liver. Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes first discovered in 1933 that catalyze the reversible hydration of carbon dioxide. CAs 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. CAs show extensive diversity in tissue distribution and in their subcellular localization. CA5B/CA-VB is localized in the mitochondria and shows the highest sequence similarity to the other mitochondrial CA5A/CA-VA. CA5B/CA-VB has a wider tissue distribution than CA5A/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. CA5A/CA-VA is activated by histamine, L-adrenaline, L-and D-histidine, and L-and D-phenylalanine. It is inhibited by coumarins, sulfonamide derivatives such as acetazolamide and Foscarnet (phosphonoformate trisodium salt). CA5B/CA-VB is inhibited by coumarins, sulfonamide derivatives such as acetazolamide (AZA), saccharin and Foscarnet (phosphonoformate trisodium salt).
References	Fujikawa-Adachi K, et al., 1999, J Biol Chem. 274 (30): 21228-33. Liao, S.Y. et al., 2003, J. Med. Genet. 40:257-262. Temperini C.et al., 2006, Chemistry 12: 7057-66. Temperini C.et al., 2006, J. Med. Chem. 49: 3019-27. Supuran, C. T. et al., 2008, Curr Pharm Des. 14 (7): 601-602. Elleuche, S. et al., 2009, Curr Genet. 55 (2): 211-222. Maresca, A.et al., 2009, J. Am. Chem. Soc. 131:3057-3062.

NCBI AND UNIPROT INFORMATION

NCBI GI #	6005723
NCBI GeneID	11238
NCBI Accession #	NP_009151.1
NCBI GenBank Nucleotide #	NM_007220.3
UniProt Accession #	Q9Y2D0; A8K4T5
Molecular Weight	36,434 Da
NCBI Official Full Name	carbonic anhydrase 5B, mitochondrial
NCBI Official Synonym Full Names	carbonic anhydrase VB, mitochondrial
NCBI Official Symbol	CA5B
NCBI Official Synonym Symbols	CA-VB
NCBI Protein Information	carbonic anhydrase 5B, mitochondrial; carbonic dehydratase; carbonate dehydratase VB
UniProt Protein Name	Carbonic anhydrase 5B, mitochondrial
UniProt Gene Name	CA5B
UniProt Synonym Gene Names	CA-VB
UniProt Entry Name	CAH5B_HUMAN

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