CA12 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CA12, Polyclonal Antibody
Full Product Name	CA12 (Carbonic Anhydrase 12, Carbonate Dehydratase XII, Carbonic Anhydrase XII, CA-XII, Tumor Antigen HOM-RCC-3.1.3) (MaxLight 550)
Product Gene Name	anti-CA12 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight550.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human CA12.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amo
Molecular Weight	39,451 Da
Chromosome Location	Chromosome: 15; NC_000015.9 (63615730..63674075, complement). Location: 15q22
OMIM	143860
3D Structure	ModBase 3D Structure for O43570
Immunogen	Full length human CA12, aa1-354 (NP_001209.1).
Immunogen Sequence	MPRRSLHAAAVLLLVILKEQPSSPAPVNGSKWTYFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQYDASLTPLEFQGYNLSANKQFLLTNNGHSVKLNL
Conjugate	MaxLight550
Note	Preservative Free
Product Categories/Family for anti-CA12 antibody	Antibodies; Enzymes
Applications Tested/Suitable for anti-CA12 antibody	Western Blot (WB)
Application Notes for anti-CA12 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-CA12 antibody	MaxLight550 is a new Yellow-Green photostable dye conjugate comparable to Alexa Fluor546, 555, DyLight549, Cy3, TRITC and offers better labeling
Other Notes	Small volumes of anti-CA12 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessa
Searchable Terms for CA12 purchase	MBS6371801 is an antibody targeting CA12. Also known as CA12 (Carbonic Anhydrase 12, Carbonate Dehydratase XII, Carbonic Anhydrase XII, CA-X

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CA12. It may not necessarily be applicable to this product.

NCBI GI #	4502515
NCBI GeneID	771
NCBI Accession #	NP_001209.1
UniProt Primary Accession #	O43570
UniProt Secondary Accession #	Q53YE5; Q9BWG2
UniProt Related Accession #	O43570
GenBank Nucleotide #	NM_001218.3
NCBI Official Full Name	carbonic anhydrase 12 isoform 1
NCBI Official Synonym Full Names	carbonic anhydrase XII
NCBI Official Symbol	CA12
NCBI Official Synonym Symbols	CAXII; HsT18816
UniProt Protein Name	Carbonic anhydrase 12
UniProt Synonym Protein Names	Carbonate dehydratase XII; Carbonic anhydrase XII; CA-XII; Tumor antigen HOM-RCC-3.1.3
Protein Family	Carbonic anhydrase
UniProt Gene Name	CA12
UniProt Synonym Gene Names	CA-XII
UniProt Entry Name	CAH12_HUMAN
NCBI Protein Information	carbonic anhydrase 12; CA-XII; carbonic dehydratase; carbonate dehydratase XII; tumor antigen HOM-RCC-3.1.3
NCBI Summary for CA12	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. This gene product is a type I membrane protein that is highly expressed in normal tissues, such as kidney, colon and pancreas, and has been found to be overexpressed in 10% of clear cell renal carcinomas. Two transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for CA12	CA12: Reversible hydration of carbon dioxide. Homodimer. Highly expressed in colon, kidney, prostate, intestine and activated lymphocytes. Expressed at much higher levels in the renal cell cancers than in surrounding normal kidney tissue. Moderately expressed in pancreas, ovary and testis. Inhibited by coumarins, saccharin, sulfonamide derivatives such as acetazolamide (AZA), benzenesulfonamide and derivatives (4-carboxyethylbenzene-sulfonamide, 4- carboxyethylbenzene-sulfonamide ethyl ester, 4-(acetyl-2- aminoethyl)benzene-sulfonamide, 4-aminoethylbenzene-sulfonamide) and Foscarnet (phosphonoformate trisodium salt). Belongs to the alpha-carbonic anhydrase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Energy Metabolism - nitrogen; EC 4.2.1.1; Membrane protein, integral; Lyase Chromosomal Location of Human Ortholog: 15q22 Cellular Component: integral to membrane; plasma membrane Molecular Function: carbonate dehydratase activity; zinc ion binding Biological Process: bicarbonate transport; one-carbon compound metabolic process; chloride ion homeostasis Disease: Hyperchlorhidrosis, Isolated
Research Articles on CA12	**1.** Serum CAXII levels were significantly higher in lung cancer patients than in healthy controls, providing evidence that CAXII may be a novel sero-diagnostic marker for lung cancer.
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