

Recombinant Anti-CA12 Antibody (V3S-0522-YC3041)

Cat. No.: V3S-0522-YC3041

Summary

Description	This product is a monoclonal antibody derived from Human (<i>Homo sapiens</i>), which can specifically recognize Carbonic Anhydrase 12. The antibody is expressed with mammalian cell transient expression system, serum-free and purified by affinity chromatography. The purity and integrity are tested via SDS-PAGE and SEC-HPLC analysis. Given an antigen, additional QC measures are also desired such as affinity testing and binding validation. Specifically, the antibody is provided in multiple formats for in vivo and in vitro assays. The <i>In vivo</i> version features greater than 95% purity, ultra-low endotoxin levels (<1 EU/mg or 0.1 E U/mg), and is preservative, stabilizer, and carrier protein-free.
Clonality	Monoclonal
Host Species	Human
Target Species	Human
Isotype	IgG
Isotype Control	C34555
Secondary Antibody	C32400; C75370; C10513; C51635; C45530

Property

Expression Species	HEK293F or CHO
Conjugation	None
Purity	>95%, determined by SDS-PAGE and/or SEC-HPLC
Endotoxin	<1 EU/mg, determined by LAL method
Purification	Protein A affinity purified
Sterility	0.2 µM filtered
Formulation	PBS, pH 7.4
Preservation	No preservatives
Stabilizer	No stabilizers
Storage	Store at 4°C within a week. For longer storage, aliquot and store at -20°C.

Applications

For lab research use only, not for diagnostic, therapeutic or any *in vivo* human use.

Application FC; ELISA; Cyt; FuncS

Application Notes The antibody is recommended for detection of CA12 by FC, ELISA, Cyt, FuncS assays.

Target

Target CA12

Alternative Name Carbonic Anhydrase 12; Carbonic Anhydrase XII; Tumor Antigen HOM-RCC-3.1.3; Carbonate Dehydratase XII; CA-XII; Carbonic Dehydratase

Gene ID [771](#)

UniProt [O43570](#)

Introduction Human CAXII was initially identified as a cancer marker in different cancers and tumors. Expression of CAXII is regulated by hypoxia and estrogen receptors. CAXII expression has been also detected in several tissues, whereas in cancer and tumor tissues its expression is several fold higher. In brain tumors, an alternatively spliced form of CAXII is expressed. Higher expression of CAXII in breast cancer is indicative of lower grade disease. CAXII plays a key role in several physiological functions. Mutation in the CAXII gene causes cystic fibrosis-like syndrome and salt wasting disease. CAXII is also seen in nuclear pulposus cells of the vertebrae. Aging dependent stiffness or degeneration of backbone correlates with CAXII expression level. This finding suggests a possible implication of CAXII as a biomarker for chronic back pain and a pharmacological target for possible treatment of chronic back pain.

Research Area Signal Pathway; Cancer Research

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