

CA12 Antibody (monoclonal) (M01)**Mouse monoclonal antibody raised against a partial recombinant CA12.****Catalog # AT1356a****Specification**

CA12 Antibody (monoclonal) (M01) - Product Information

Application	WB, E
Primary Accession	O43570
Other Accession	NM_206925
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a Kappa
Calculated MW	39451

CA12 Antibody (monoclonal) (M01) - Additional Information**Gene ID** 771**Other Names**

Carbonic anhydrase 12, Carbonate dehydratase XII, Carbonic anhydrase XII, CA-XII, Tumor antigen HOM-RCC-313, CA12

Target/Specificity

CA12 (NP_996808, 25 a.a. ~ 124 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Dilution

WB~~1:500~1000

Format

Clear, colorless solution in phosphate buffered saline, pH 7.2 .

Storage

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Precautions

CA12 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

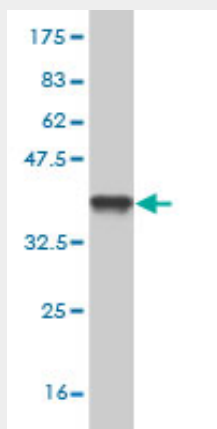
CA12 Antibody (monoclonal) (M01) - Protocols

Provided below are standard protocols that you may find useful for product applications.

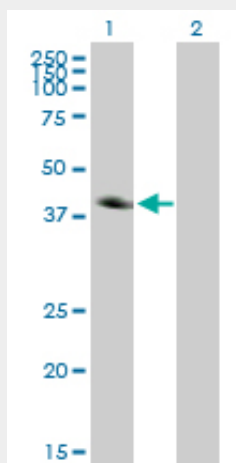
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CA12 Antibody (monoclonal) (M01) - Images



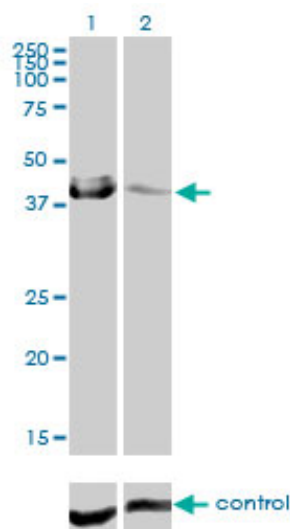
Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (36.74 kDa) .



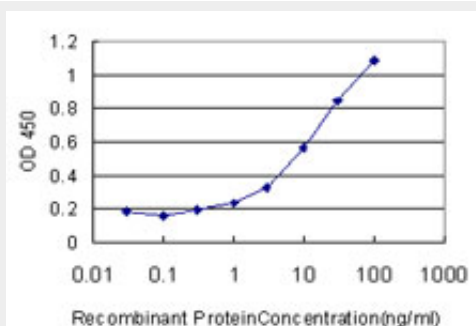
Western Blot analysis of CA12 expression in transfected 293T cell line by CA12 monoclonal antibody (M01), clone 1D4.

Lane 1: CA12 transfected lysate (39.5 kDa).

Lane 2: Non-transfected lysate.



Western blot analysis of CA12 over-expressed 293 cell line, cotransfected with CA12 Validated Chimera RNAi (Cat # AT1356a)



Detection limit for recombinant GST tagged CA12 is approximately 1ng/ml as a capture antibody.

CA12 Antibody (monoclonal) (M01) - Background

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.

CA12 Antibody (monoclonal) (M01) - References

Carbonic anhydrases II and XII are up-regulated in osteoclast-like cells in advanced human atherosclerotic plaques-Tampere Vascular Study. Oksala N, et al. Ann Med, 2010 Jul. PMID 20509747. Carbonic anhydrase XII promotes invasion and migration ability of MDA-MB-231 breast cancer cells through the p38 MAPK signaling pathway. Hsieh MJ, et al. Eur J Cell Biol, 2010 Aug. PMID 20434230. The tumour-associated carbonic anhydrases CA II, CA IX and CA XII in a group of medulloblastomas and supratentorial primitive neuroectodermal tumours: an association of CA IX with poor prognosis. Nordfors K, et al. BMC Cancer, 2010 Apr 18. PMID 20398423. Differential modulation of the active site environment of human carbonic anhydrase XII by cationic quantum dots and polylysine. Manokaran S, et al. Biochim Biophys Acta, 2010 Jun. PMID 20215053. Expression of transmembrane carbonic anhydrases, CAIX and CAXII, in human development. Liao SY, et al. BMC Dev Biol, 2009 Mar 16. PMID 19291313.