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CA9 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5000e

Product Information

Application	WB, FC, IF, E
Primary Accession	Q16790
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18383
Calculated MW	49698
Antigen Region	113-143

Additional Information

Gene ID	768
Other Names	Carbonic anhydrase 9, Carbonate dehydratase IX, Carbonic anhydrase IX, CA-IX, CAIX, Membrane antigen MN, P54/58N, Renal cell carcinoma-associated antigen G250, RCC-associated antigen G250, pMW1, CA9, G250, MN
Target/Specificity	This CA9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 113-143 amino acids from the Central region of human CA9.
Dilution	WB~~1:1000 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CA9 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CA9
Synonyms	G250, MN

Function	Catalyzes the interconversion between carbon dioxide and water and the dissociated ions of carbonic acid (i.e. bicarbonate and hydrogen ions).
Cellular Location	Nucleus. Nucleus, nucleolus. Cell membrane; Single-pass type I membrane protein. Cell projection, microvillus membrane; Single-pass type I membrane protein. Note=Found on the surface microvilli and in the nucleus, particularly in nucleolus
Tissue Location	Expressed primarily in carcinoma cells lines. Expression is restricted to very few normal tissues and the most abundant expression is found in the epithelial cells of gastric mucosa

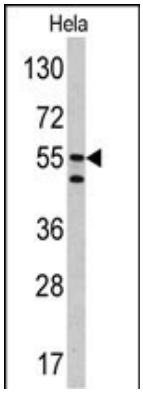
Background

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. They show extensive diversity in tissue distribution and in their subcellular localization. CA IX is a transmembrane protein and the only tumor-associated carbonic anhydrase isoenzyme known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation.

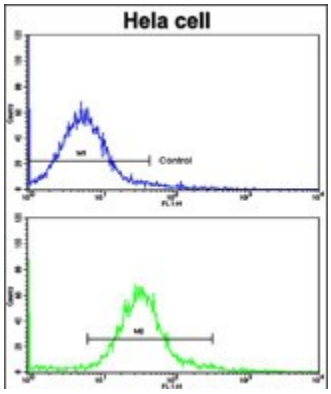
References

Grabmaier, K., et al., Oncogene 23(33):5624-5631 (2004).
Kaluzova, M., et al., Mol. Cell. Biol. 24(13):5757-5766 (2004).
Span, P.N., et al., Br. J. Cancer 89(2):271-276 (2003).
Hedley, D., et al., Clin. Cancer Res. 9(15):5666-5674 (2003).
Bui, M.H., et al., Clin. Cancer Res. 9(2):802-811 (2003).

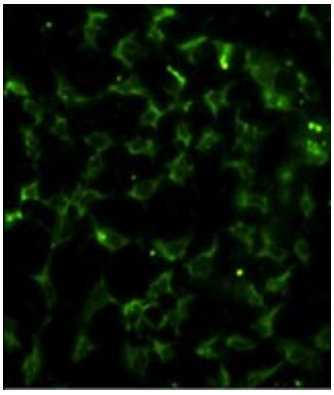
Images



Western blot analysis of CA9 antibody (Center) (Cat.# AP5000e) in Hela cell line lysates (35ug/lane). CA9 (arrow) was detected using the purified Pab.



Flow cytometric analysis of hela cells using CA9 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Immunofluorescence analysis of CA9 Antibody (Center) with hela cells . 0.025 mg/ml primary antibody was followed by FITC-conjugated goat anti-rabbit lgG (whole molecule). FITC emits green fluorescence.

Citations

- Overexpression of FZD1 and CAIX are Associated with Invasion, Metastasis, and Poor-Prognosis of the Pancreatic Ductal Adenocarcinoma.