

Product Name: KD-Validated Carbonic Anhydrase 9 Recombinant Rabbit Monoclonal Antibody

Catalog #: KVA00213

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 49.7kDa

Antigen Information

Gene Name	CA9
Alternative Names	CA9; Carbonic Anhydrase 9; CAIX; MN; Carbonic Anhydrase IX; Renal Cell Carcinoma-Associated Antigen G250; RCC-Associated Protein G250; RCC-Associated Antigen G250; Carbonate Dehydratase IX; Carbonic Dehydratase; Membrane Antigen MN; P54/58N; CA-IX; PMW1; EC 4.2.1.1; G250
Gene ID	768.0
SwissProt ID	Q16790
Immunogen	A synthesized peptide derived from human CA9

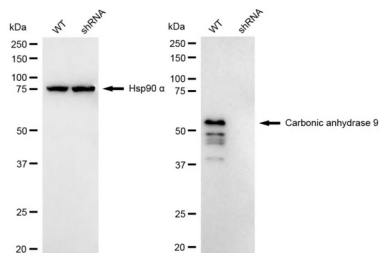
Background

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 is one of only two tumor-associated carbonic anhydrase isoenzymes 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. This gene was mapped to 17q21.2 by fluorescence in situ hybridization, however, radiation hybrid mapping localized it to 9p13-p12. [provided by RefSeq, Jun 2014]

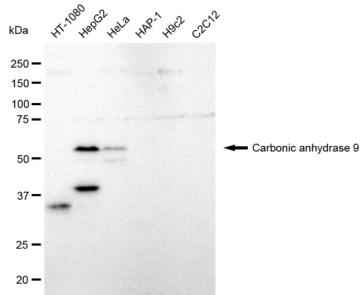
Research Area

Cardiovascular,Signal Transduction,Cancer,Metabolism

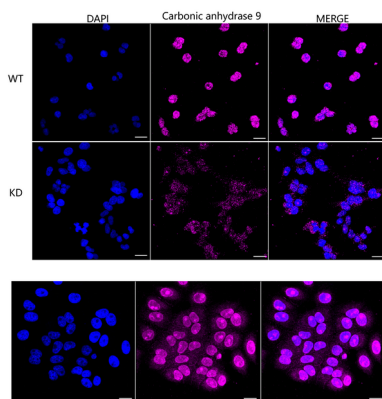
Image Data



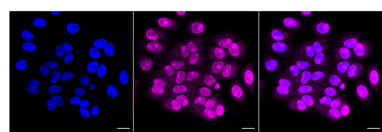
Western blotting analysis using Carbonic anhydrase 9 antibody (KVA00213). Carbonic anhydrase 9 expression in wild type (WT) and Carbonic anhydrase 9 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with Carbonic anhydrase 9 antibody (KVA00213, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



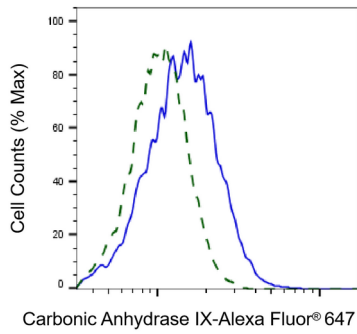
Western blotting analysis using Carbonic anhydrase 9 antibody (KVA00213). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Carbonic anhydrase 9 antibody (KVA00213, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HeLa cells using Carbonic anhydrase 9 antibody (KVA00213, 1:1,000), Top panel: wild-type (WT); Bottom panel: Carbonic anhydrase 9 shRNA knockdown (KD). Nuclei were stained blue with DAPI; Carbonic anhydrase 9 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Immunocytochemical staining of HepG2 cells with carbonic anhydrase 9 antibody (KVA00213, 1:1,000). Nuclei were stained blue with DAPI; Carbonic anhydrase 9 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar, 20 µm.



Validation of Carbonic Anhydrase 9 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with Carbonic Anhydrase 9 antibody (KVA00213, 1:2,000) and analyzed using BD flow cytometer.