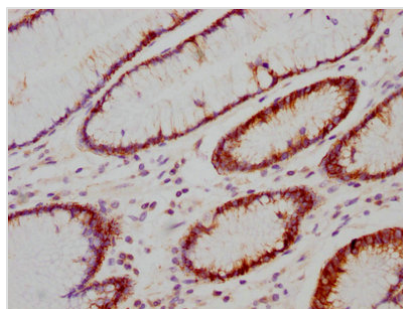




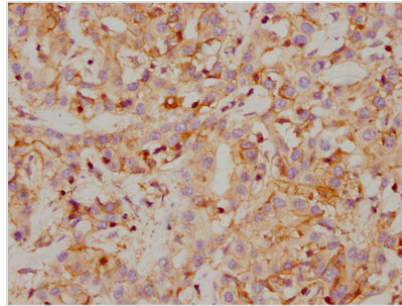
# CA9 Recombinant Monoclonal Antibody

|                            |                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>        | CSB-RA614990A0HU                                                                                                                                                                                                   |
| <b>Abbreviation</b>        | Carbonic anhydrase 9                                                                                                                                                                                               |
| <b>Storage</b>             | Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.                                                                                                                                                      |
| <b>Uniprot No.</b>         | Q16790                                                                                                                                                                                                             |
| <b>Immunogen</b>           | A synthesized peptide derived from human CA9                                                                                                                                                                       |
| <b>Species Reactivity</b>  | Human                                                                                                                                                                                                              |
| <b>Tested Applications</b> | ELISA, IHC; Recommended dilution: IHC:1:50-1:200                                                                                                                                                                   |
| <b>Relevance</b>           | Reversible hydration of carbon dioxide. Participates in pH regulation. May be involved in the control of cell proliferation and transformation. Appears to be a novel specific biomarker for a cervical neoplasia. |
| <b>Form</b>                | Liquid                                                                                                                                                                                                             |
| <b>Conjugate</b>           | Non-conjugated                                                                                                                                                                                                     |
| <b>Storage Buffer</b>      | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                 |
| <b>Purification Method</b> | Affinity-chromatography                                                                                                                                                                                            |
| <b>Isotype</b>             | Rabbit IgG                                                                                                                                                                                                         |
| <b>Clonality</b>           | Monoclonal                                                                                                                                                                                                         |
| <b>Alias</b>               | 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   |
| <b>Immunogen Species</b>   | Homo sapiens (Human)                                                                                                                                                                                               |
| <b>Research Area</b>       | Cardiovascular                                                                                                                                                                                                     |
| <b>Gene Names</b>          | CA9                                                                                                                                                                                                                |
| <b>Clone No.</b>           | 4F12                                                                                                                                                                                                               |

## Image



IHC image of CSB-RA614990A0HU diluted at 1:118 and staining in paraffin-embedded human gastric cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA614990A0HU diluted at 1:118 and staining in paraffin-embedded human liver cancer performed on a Leica Bond<sup>TM</sup> system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

## Description

The recombinant CA9 antibody is a monoclonal antibody made in vitro using the CA9 antibody genes that are typically expressed from a plasmid in a stable mammalian cell line. The genes coding for the CA9 antibody will ultimately assemble into a fully functional antibody after translation. The synthesized antibody is the recombinant antibody against CA9. It underwent purification using affinity-chromatography. This recombinant CA9 antibody is suitable for use in the ELISA, IHC to detect the CA9 protein from Human.

CA9 is a hypoxia-induced isoenzyme that catalyzes the reversible metabolism of carbon to carbonic acid thus regulating intracellular pH homeostasis. CA9 possesses pleiotropic functions. As a survival factor, CD9 protects tumor cells from hypoxia and acidosis. It also serves as a pro-migratory factor encouraging cell movement and invasion, as a signaling protein converting intracellular signals to extracellular effects on adhesion, proteolysis, and other activities. Under hypoxic conditions, CA9 expression is dramatically upregulated in tumor cells, which aids in maintaining a normal intracellular pH while facilitating an acidic extracellular pH that promotes cancer progression. CA9 expression has been linked to poor clinical outcomes in malignancies of the head and neck, cervix, kidney, and lung.