

## Human CellExp™ Carbonic Anhydrase 9/CA9, human recombinant

**CATALOG #:** 7478-10 10 µg  
**ALTERNATE NAMES:** CAIX, CA9, CA-IX, G250, MN, P54/58N, pMW1

**SOURCE:** HEK 293 cells (Gln 38 – Asp 414)

**PURITY:** ≥ 95% by SDS-PAGE gel

**MOL. WEIGHT:** This protein is fused with 6xHis tag at the C-terminus, has a calculated MW of 41.2 kDa. The predicted N-terminus is Gln 38. DTT-reduced Protein migrates as 53-54 kDa due to glycosylation.

**ENDOTOXIN LEVEL:** <1 EU/µg by LAL method

**FORM:** Lyophilized

**FORMULATION:** Lyophilized from 0.22 µm filtered solution in 20 mM MES and 100 mM NaCl, pH 6.5. Normally Mannitol or Trehalose is added as protectants before lyophilization.

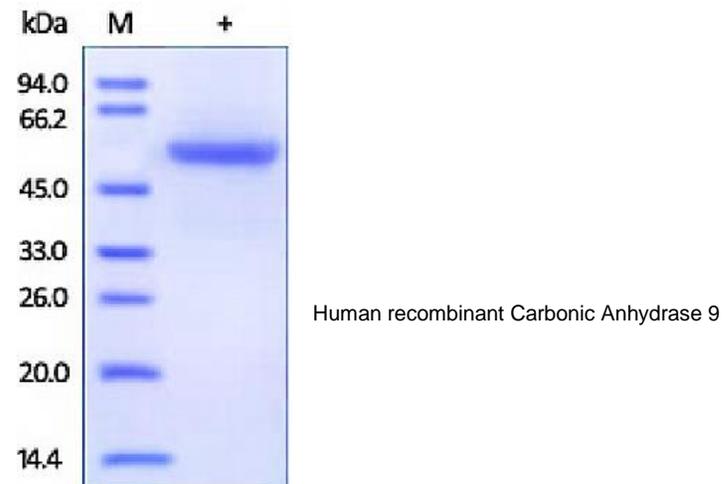
**STORAGE CONDITIONS:** Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

**RECONSTITUTION:** Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

**DESCRIPTION:** Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes. CAs form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons (or vice versa), a reversible reaction that occurs rather slowly in the absence of a catalyst. One of the functions of the enzyme in animals is to interconvert carbon dioxide and bicarbonate to maintain acid-base balance in blood and other tissues, and to help transport carbon dioxide out of tissues. The active site of most carbonic anhydrases contains a zinc ion. There are at least five distinct CA families (α, β, γ, δ and ε). Carbonic anhydrase 9 (CA9 / CAIX), also known as Membrane antigen MN (MN), Renal cell carcinoma-associated antigen G250, which belongs to the alpha-carbonic anhydrase family. CA9 / CAIX with an optimal activity at pH 6.49. Reversible hydration of carbon dioxide. CA IX participates in pH regulation. CA9 may be involved in

the control of cell proliferation and transformation. CA-IX appears to be a novel specific biomarker for a cervical neoplasia.

**BIOLOGICAL ACTIVITY:** Measured by its esterase activity. The specific activity is measured with 1 mM 4-Nitrophenyl acetate and 2.5 µg enzyme at 400 nm in 100 µL of 12.5 mM Tris, 75 mM NaCl, pH 7.5. The specific activity is > 15 pmoles / min / µg.



### RELATED PRODUCTS:

- Human CellExp™ CA2, human recombinant (Cat. No. 7479-10, -50)
- Human CellExp™ CA4, human recombinant (Cat. No. 7484-10)
- Human CellExp™ CA10, human recombinant (Cat. No. 7485-10)
- Human Recombinant Carbonic anhydrase 2 (Cat. No. 6390-100)
- MMP-1, human recombinant (Cat. No. 7781-10, 50, 1000)
- MMP-2, human recombinant (Cat. No. 7782-10, 50, 1000)
- MMP-3, human recombinant (Cat. No. 7783-10, 50, 1000)
- MMP-9, human recombinant (Cat. No. 7789-10, 50, 1000)

**FOR RESEARCH USE ONLY! Not to be used in humans.**