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Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein

CAIX, CA9, CA-IX, G250, MN, P54/58N, pMW1
Catalog # PBV11099r

Specification

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - Product info

Primary Accession	Q16790
Calculated MW	**This protein is fused with 6×His 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. KDa**

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - Additional Info

Gene ID	**768**
Gene Symbol	**CA9**

Other Names
CAIX, CA9, CA-IX, G250, MN, P54/58N, pMW1

Gene Source	**Human**
Source	**HEK293 cells**
Assay&Purity	**SDS-PAGE; ≥95%**
Assay2&Purity2	**N/A;**
Recombinant	**Yes**
Results	**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.**

Target/Specificity
Carbonic Anhydrase 9/CA9

Application Notes
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.

Format
Lyophilized

Storage
-20°C; 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.

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - Images

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - Background

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.

Human CellExp Carbonic Anhydrase 9/CA9, human recombinant protein - References

Pastorek J.,et al.Oncogene 9:2877-2888(1994).
Grabmaier K.,et al.Int. J. Cancer 85:865-870(2000).
Humphray S.J.,et al.Nature 429:369-374(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Zhang Z.,et al.Protein Sci. 13:2819-2824(2004).