

**HUMAN CA9 PROTEIN, HIS TAG****Cat.#:** 11236**Product Name:** Human CA9 Protein**Size :** 10 µg, 50 µg and 100 µg**Synonyms:** CAIX;MN**Target:** CA9**UNIPROT ID:** Q16790**Description:** Recombinant Human CA9 Protein with C-terminal 6xHis tag

**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.

**Species/Host:** HEK293

**Molecular Weight:** The protein has a predicted molecular mass of 41.5 kDa after removal of the signal peptide. The apparent molecular mass of CA9-His is approximately 35–55 kDa due to glycosylation.

**Molecular Characterization:** CA9(Gln38–Asp414) 6×His tag

**Purity:** The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.

**Formulation & Reconstitution:** Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization.

**Storage & Shipping:** Store at –20°C to –80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at –80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

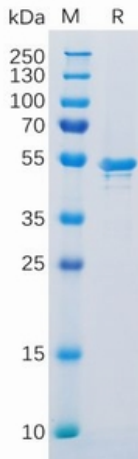


Figure 1. Human CA9 Protein, His Tag on SDS-PAGE under reducing condition.

## Human CA9, His Tagged protein ELISA

0.2  $\mu$ g of Human CA9, His Tagged protein per well

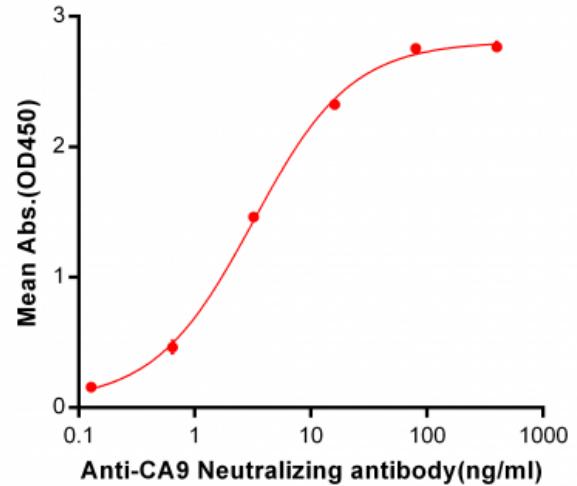


Figure 2. ELISA plate pre-coated by 2  $\mu$ g/ml (100  $\mu$ l/well) Human CA9, His tagged protein (11236) can bind Anti-CA9 Neutralizing antibody 28049 in a linear range of 0.128-80 ng/ml.