

CA2

Reactivity: Human Mouse Rat

Tested applications: WB IHC IF

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200 IF 1:10 - 1:100

Calculated MW: 29kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human CA2

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

CAC; CAlI; Car2; CA-II;

Catalog #: A1440

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 760

Isotype: IgG

Swiss Prot: P00918

Purity: Affinity purification

For research use only.

Background:

Carbonic anhydrases (CA) are a family of ancient zinc metalloenzymes found in almost all living organisms. All CA can be divided into 3 distinct classes (, , and) that evolved independently and have no significant homology in sequence and overall folding. All functional CA catalyze the reversible hydration of CO₂ into HCO₃⁻ and H⁺ and contain a zinc atom in the active sites essential for catalysis. There are many isoforms of CA in mammals and they all belong to the class (1,2). CA2 is a cytosolic member of the class. It is the most widely distributed isoform among the mammalian CAs (1). Defects in CA2 are associated with osteopetrosis and renal tubular acidosis (3-5). Elevated expression of CA2 is observed in patients with Alzheimers disease and the developing brains of Down syndrome patients (6,7). CA2 is also overexpressed in Gastrointestinal Stromal Tumors (GISTs) and is considered a useful marker for diagnosis (8). Recently, CA2 was reported to facilitate transporter activity of the monocarboxylate transporter isoform 1 and 4 (MCT1/4) independent of its own catalytic activity (9,10)

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