

## Product datasheet for **TA327047S**

### Carbonic Anhydrase II (CA2) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB 1:500 - 1:2000
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein of human CA2
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	29 kDa
Gene Name:	carbonic anhydrase 2
Database Link:	<a href="#">NP_000058</a> <a href="#">Entrez Gene 760 Human P00918</a>



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**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 ( $\alpha$ ,  $\beta$ , and  $\gamma$ ) that evolved independently and have no significant homology in sequence and overall folding. All functional CA catalyze the reversible hydration of  $\text{CO}_2$  into  $\text{HCO}_3^-$  and  $\text{H}^+$  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  $\alpha$  class. CA2 is a cytosolic member of the  $\alpha$  class. It is the most widely distributed isoform among the mammalian CAs. Defects in CA2 are associated with osteopetrosis and renal tubular acidosis. Elevated expression of CA2 is observed in patients with Alzheimer's disease and the developing brains of Down syndrome patients. CA2 is also overexpressed in Gastrointestinal Stromal Tumors (GISTs) and is considered a useful marker for diagnosis. Recently, CA2 was reported to facilitate transporter activity of the monocarboxylate transporter isoform 1 and 4 (MCT1/4) independent of its own catalytic activity.

**Synonyms:**

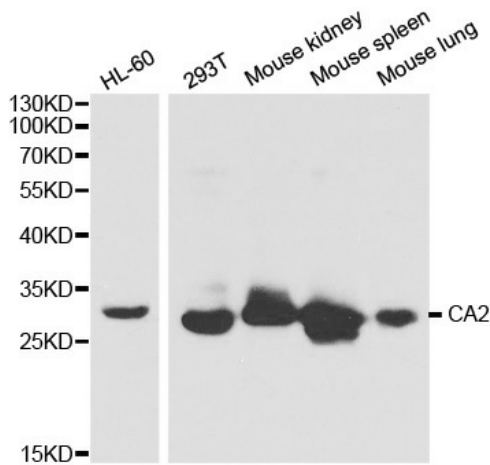
CA-II; CAC; CAII; Car2; HEL-76; HEL-S-282

**Protein Families:**

Druggable Genome

**Protein Pathways:**

Nitrogen metabolism

**Product images:**


Western blot analysis of extracts of various cell lines, using CA2 antibody.