

Datasheet for ABIN2180674

CA2 Protein (AA 1-260) (His tag)[Go to Product page](#)**1** Image**1** Publication

Overview

Quantity:	100 µg
Target:	CA2
Protein Characteristics:	AA 1-260
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CA2 protein is labelled with His tag.

Product Details

Sequence:	AA 1-260
Characteristics:	This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 30 kDa. The protein migrates as 30 kDa under reducing (R) condition (SDS-PAGE).
Purity:	>95 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	CA2
Alternative Name:	Carbonic Anhydrase II (CA2 Products)
Background:	Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes. CAs form a family of

Target Details

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. They are, therefore, classified as metalloenzymes. There are at least five distinct CA families (α , β , γ , δ and ϵ). These families have no significant amino acid sequence similarity and in most cases are thought to be an example of convergent evolution. The α -CAs are found in humans. Carbonic anhydrase II (CA2) is also known as Carbonate dehydratase II, Carbonic anhydrase C, is one of fourteen forms of human α carbonic anhydrases. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Renal carbonic anhydrase allows the reabsorption of sodium ions in the proximal tubule. Carbonic anhydrase II has been shown to interact with Band 3 and Sodium-hydrogen antiporter 1.

Molecular Weight: 30.1 kDa

NCBI Accession: [NP_000058](#)

Application Details

Restrictions: For Research Use only

Handling

Format: Lyophilized

Buffer: 20 mM Tris, 150 mM NaCl, pH 8.0

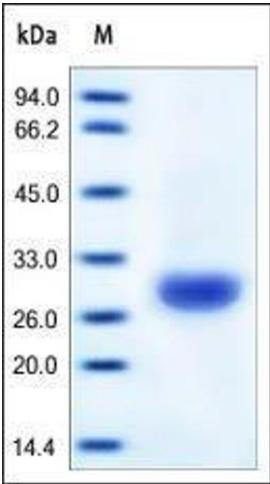
Handling Advice: Please avoid repeated freeze-thaw cycles.

Storage: -20 °C

Storage Comment: No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

Publications

Product cited in: Mettler Izquierdo, Varela, Park, Collarini, Lu, Pramanick, Rucker, Lopalco, Etches, Harriman: "High-efficiency antibody discovery achieved with multiplexed microscopy." in: **Microscopy (Oxford, England)**, Vol. 65, Issue 4, pp. 341-52, (2018) ([PubMed](#)).



SDS-PAGE

Image 1. Human Carbonic Anhydrase II, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.