

DESCRIPTION

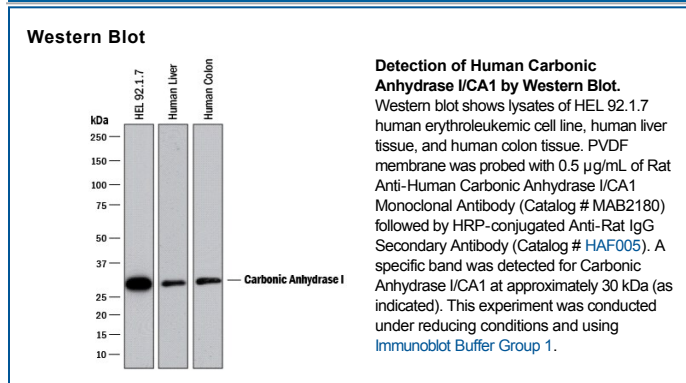
Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase I/CA1 in direct ELISAs and Western blots. In Western blots, 30% cross-reactivity with recombinant human (rh) CA2 is observed and no cross-reactivity with rhCA3, -4, -7, -8, -10, -11, -12, -13, or -14 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 363121
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Carbonic Anhydrase I/CA1 Ala2-Phe261 Accession # P00915
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Carbonic Anhydrase (CA) catalyzes the reversible reaction of $\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+$, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption (1). CA1 is a cytosolic enzyme with the highest levels in erythrocytes and is a very early marker for erythroid differentiation (2). The activity of CA1 can also be measured by its ability to catalyze the reaction $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{HCO}_3^- + \text{H}^+$, using a published method (3).

References:

1. Hewett-Emmett, D. and R.E. Tashian (1996) *Mol. Phylogenet. Evol.* **5**:50.
2. Sly, W.S. and P.Y. Hu (1995) *Annu. Rev. Biochem.* **64**:375.
3. Wilbur, K.M. and N.G. Anderson (1948) *J. Biol. Chem.* **176**:147.