

DESCRIPTION

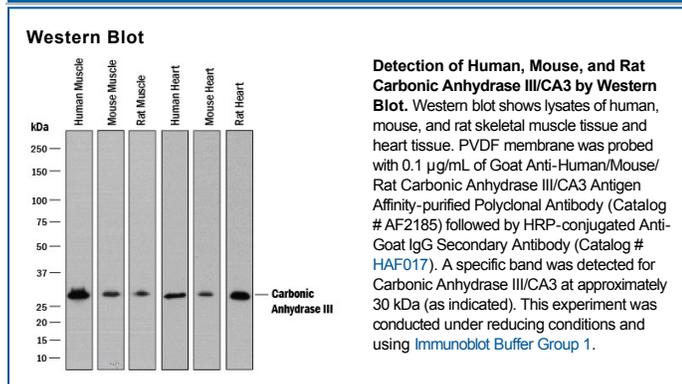
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Carbonic Anhydrase III/CA3 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) CA1, rhCA2, rhCA4, rhCA9, rhCA10, rhCA13 and rhCA14 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Carbonic Anhydrase III/CA3 Ala2-Lys260 Accession # P07451
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	0.1 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Carbonic Anhydrase III (Catalog # 2185-CA), see our available Western blot detection antibodies

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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).

Topics in a CA meeting (6th International Conference on the CAs, June 20-25, 2003, Slovakia) ranged from the use of CAs as markers for tumor and hypoxia in the clinic, as a nutritional supplement in milk, and as a tool for CO_2 removal and mosquito control in industry. CA3 is a cytosolic enzyme with a very low CA activity. It is expressed at low levels in human muscle during early development but increases rapidly during the last trimester to reach 50-60% of adult levels at birth (2).

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.