

DESCRIPTION

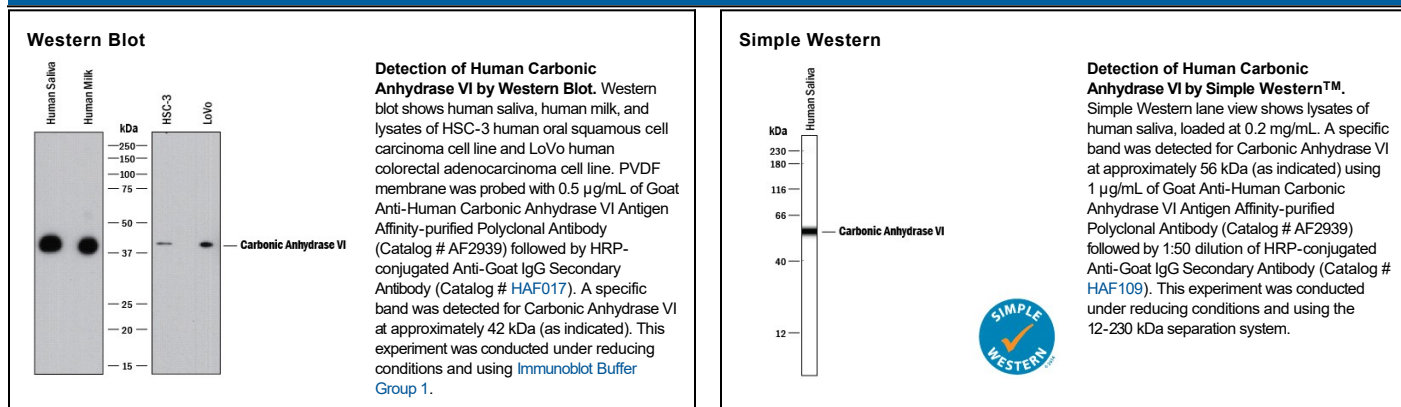
Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase VI in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) Carbonic Anhydrase (CA) 5A and rhCA5B is observed and less than 1% cross-reactivity with rhCA1, rhCA2, rhCA3, rhCA4, rhCA7, rhCA8, rhCA9, rhCA10, rhCA12, rhCA13, and rhCA14 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase VI Gln18-Asn308 Accession # EAW71606
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 either lyophilized or 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
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Carbonic Anhydrase VI (Catalog # 2939-CA), see our available Western blot detection antibodies
Simple Western	1 µg/mL	See Below

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 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.

Carbonic Anhydrase VI, also known as gustin and salivary Carbonic Anhydrase, is a zinc-metalloprotein that constitutes about 3% of human parotid saliva protein (2, 3). It was decreased in patients with loss of taste and pathological changes in taste buds (4). It is also an elementary component of milk. It plays an important role in normal growth and development of the infant alimentary tract (5).

References:

1. Hewett-Emmett, D. and R.E. Tashian (1996) Mol. Phylogenet. Evol. **5**:50.
2. Murakami, H. and Sly, W. S. (1987) J. Biol. Chem. **262**:1382.
3. Thatcher, B. J. *et al.* (1998) Biochem. Biophys. Res. Commun. **250**:635.
4. Hankin, R. I. *et al.* (1999) Am. J. Med. Sci. **318**:380.
5. Karhumaa, P. *et al.* (2001) Proc. Natl. Acad. Sci. USA. **98**:11604.