

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Carbonic Anhydrase XIV/CA14 in Western blots. In Western blots, approximately 25% cross-reactivity with recombinant mouse CA14 is observed and less than 5% cross-reactivity with recombinant human (rh) CA1, rhCA2, rhCA3, rhCA4, rhCA8, rhCA9, rhCA10, rhCA12, and rhCA13 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase XIV/CA14 Gly19-Met290 Accession # Q9ULX7
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

#### 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Carbonic Anhydrase XIV (Catalog # <a href="#">2195-CA</a> )

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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 (6<sup>th</sup> 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  $\text{CO}_2$  removal and mosquito control in industry. CA14 is a type I membrane enzyme highly expressed in all parts of the central nervous system with lower expression in adult liver, heart, small intestine, colon, kidney, urinary bladder, and skeletal muscle (2).

#### References:

1. Hewett-Emmett, D. and R.E. Tashian (1996) Mol. Phylogenet. Evol. **5**:50.
2. Fujikawa-Adachi, K. *et al.* (1999) Genomics **61**:74.