

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase XIV/CA14 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant mouse CA14, 10% cross-reactivity with recombinant human (rh) CA5A, and no cross-reactivity with rhCA1, 2, 3, 4, 6, 7, 8, 9, 10, 12, or 13 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 312908
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase XIV/CA14 Gly19-Met290 Accession # Q9ULX7
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	1 µg/mL	Recombinant Human Carbonic Anhydrase XIV (Catalog # 2195-CA)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Carbonic Anhydrase XIV (Catalog # 2195-CA), see our available Western blot detection antibodies

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. 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 14 (CA14) has a C-terminal transmembrane domain (aa 291 - 311) and a short cytoplasmic tail (aa 312 - 337). As a functioning enzyme of the CA family, it catalyzes the reversible hydration of CO₂. CA14 is 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. The rhCA14 corresponds to the 272 aa ectodomain that has a predicted molecular mass of approximately 32 kDa and an apparent molecular mass of approximately 43 kDa in SDS-PAGE. The amino acid sequence of the human ectodomain shares 98%, 86%, 84%, and 83% identity with that of chimpanzee, bovine/dog, rat and mouse, respectively.