

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CA4 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CA1, 2, 3, 4, 5A, 5B, 6, 7, 8, 9, 10, 11, 12, 13, 14, recombinant mouse CA9, 12, or 14 is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 565112
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Carbonic Anhydrase IV Glu18-Ser277 Accession # Q64444
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.

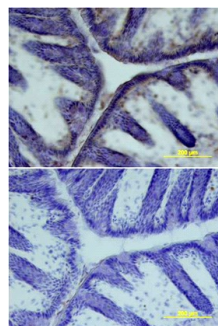
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

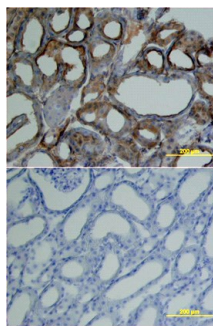
DATA

Immunohistochemistry



Carbonic Anhydrase IV in Mouse Small Intestine. Carbonic Anhydrase IV was detected in perfusion fixed frozen sections of mouse small intestine using Mouse Carbonic Anhydrase IV Monoclonal Antibody (Catalog # MAB2414) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. Specific staining was localized to nuclei, cell surfaces and cytoplasm. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

Immunohistochemistry



Carbonic Anhydrase IV in Mouse Kidney. Carbonic Anhydrase IV was detected in perfusion fixed frozen sections of mouse kidney using Mouse Carbonic Anhydrase IV Monoclonal Antibody (Catalog # MAB2414) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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 IV (CA4) is a 32 kDa GPI-anchored membrane zinc metalloenzyme that is involved in bicarbonate transport and pH regulation. CA4 is expressed on the luminal surfaces of renal proximal tubules and pulmonary and retinal capillaries. Loss of function mutation of CA4 function is associated with retinal degeneration. Mature mouse and human CA4 share 55% amino acid sequence identity.