Product datasheet

Anti-CA1 Antibody (Clone#4D5)

Catalog Number: *M00170-1*

BOSTER®
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
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Basic Information

Product Name	Anti-CA1 Antibody (Clone#4D5)
Gene Name	CA1
Source	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	E.coli-derived human CA1 recombinant protein (Position: D9-F261). Human CA1?shares?78.5%?and 81% amino?acid?(aa)?sequence?identity?with mouse and rat CA1, respectively.
Concentration	500 ug/ml
Purification	protein G purified.
Observed MW	29 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

Carbonic anhydrase 1 is an enzyme that in humans is encoded by the CA1 gene. It is a member of the Carbonic anhydrase. The CA1 gene is mapped to 8q22. CAI has got about 260 amino acids. This protein is highly expressed in erythrocytes. As catalysts of the reversible hydration of carbon dioxide, CAI participates in a variety of biologic processes like respiration, calcification, acid-base balance etc.

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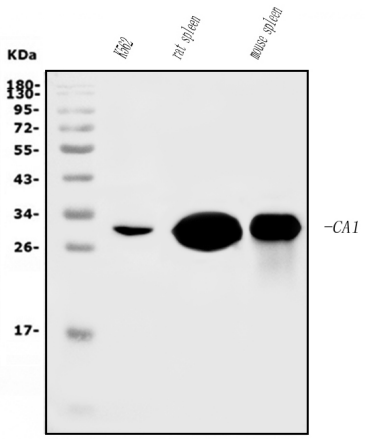
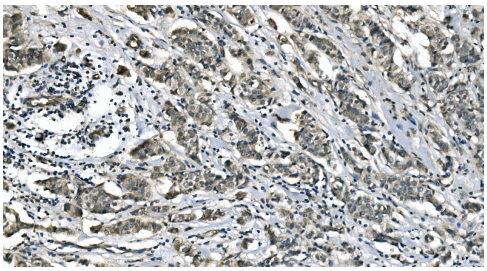
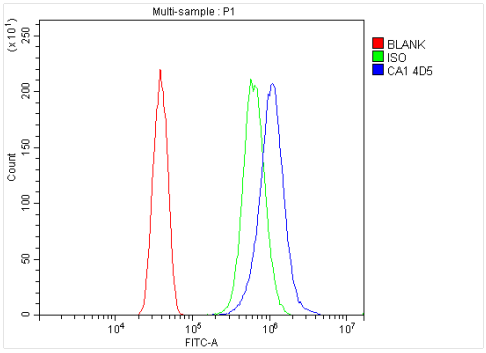
Selected Validation Data



Western blot analysis of CA1 using anti-CA1 antibody (M00170-1).
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human K562 whole cell lysates,
Lane 2: rat spleen tissue lysates,
Lane 3: mouse spleen tissue lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-CA1 antigen affinity purified monoclonal antibody (M00170-1) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for CA1 at approximately 29 kDa. The expected band size for CA1 is at 29 kDa.



IHC analysis of CA1 using anti-CA1 antibody (M00170-1).
CA1 was detected in a paraffin-embedded section of human breast cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-CA1 Antibody (M00170-1) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.



Flow Cytometry analysis of SiHa cells using anti-CA1 antibody (M00170-1).
Overlay histogram showing SiHa cells stained with M00170-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-CA1 Antibody (M00170-1) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse

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IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.