Product datasheet

Anti-ALDH2 Antibody (Clone#6H2)

Catalog Number: *M00546-2*

BOSTER®
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
East Lake High-Tech Development Zone, Wuhan.
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Basic Information

Product Name	Anti-ALDH2 Antibody (Clone#6H2)
Gene Name	ALDH2
Source	Mouse
Clonality	Monoclonal
Isotype	IgG1
Species Reactivity	human, mouse, rat
Tested Application	WB, ICC/IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH2, different from the related mouse sequence by two amino acids, and from the related rat sequence by one amino acid.
Concentration	500 ug/ml
Purification	protein G purified.
Observed MW	56 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunocytochemistry/Immunofluorescence (ICC/IF):1:50-400 Flow Cytometry (Fixed): 1:50-200

Storage

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

Background Information

ALDH2 (Aldehyde Dehydrogenase 2 Family) is a human gene. The enzyme encoded by this gene belongs to the aldehyde dehydrogenase family of enzymes that catalyze the chemical transformation from acetaldehyde to acetic acid. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. Hsu et al. (1985) assigned the ALDH2 locus to chromosome 12 by means of a cDNA probe and Southern blot analysis of somatic cell hybrids. Using an unbiased proteomic search, Chen et al. (2008) identified mitochondrial ALDH2 as an enzyme whose activation correlated with reduced ischemic heart damage in rodent models. A high-throughput screen identified a small molecule activator of ALDH2, which they called Alda-1, that, when administered to rats before an ischemic event, reduced infarct size by 60%, most likely through its inhibitory effect on the formation of cytotoxic aldehydes.

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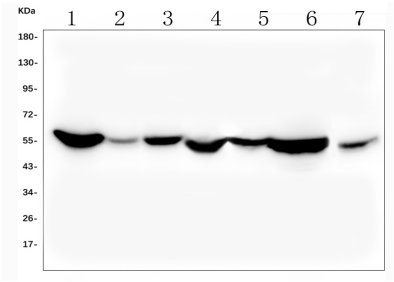
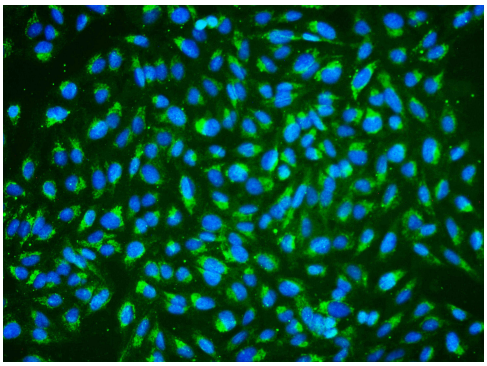
Selected Validation Data



Western blot analysis of ALDH2 using anti-ALDH2 antibody (M00546-2). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: human HEK293 whole cell lysates,
Lane 4: human HL-60 whole cell lysates,
Lane 5: human SHG-44 whole cell lysates,
Lane 6: human THP-1 whole cell lysates,
Lane 7: human K562 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-ALDH2 antigen affinity purified monoclonal antibody (M00546-2) 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 ALDH2 at approximately 56 kDa. The expected band size for ALDH2 is at 56 kDa.



IF analysis of ALDH2 using anti-ALDH2 antibody (M00546-2).
ALDH2 was detected in immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2μg/mL mouse anti-ALDH2 Antibody (M00546-2) overnight at 4°C. DyLight488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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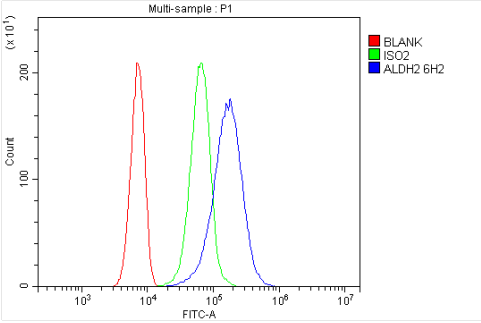

Flow Cytometry analysis of SiHa cells using anti-ALDH2 antibody (M00546-2).
Overlay histogram showing SiHa cells stained with M00546-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ALDH2 Antibody (M00546-2) at 1:100 dilution for 30 min at 20°C. DyLight®488 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 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.