Product datasheet

Anti-IDH1 Antibody (Clone#16H7)

Catalog Number: *M00129-1*

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-IDH1 Antibody (Clone#16H7)
Gene Name	IDH1
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 C-terminus of human IDH1, different from the related mouse and rat sequences by one amino acid.
Concentration	500 ug/ml
Purification	protein G purified.
Observed MW	47 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

Isocitrate dehydrogenase 1 (NADP+),soluble is an enzyme that in humans is encoded by the IDH1 gene. Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses,one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases,which localize to the mitochondrial matrix,and two NADP(+)-dependent isocitrate dehydrogenases,one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. It contains the PTS-1 peroxisomal targeting signal sequence. The presence of this enzyme in peroxisomes suggests roles in the regeneration of NADPH for intraperoxisomal reductions,such as the conversion of 2,4-dienoyl-CoAs to 3-enoyl-CoAs,as well as in peroxisomal reactions that consume 2-oxoglutarate,namely the alpha-hydroxylation of phytanic acid. The cytoplasmic enzyme serves a significant role in cytoplasmic NADPH production. Alternatively spliced transcript variants encoding the same protein have been found for this gene.

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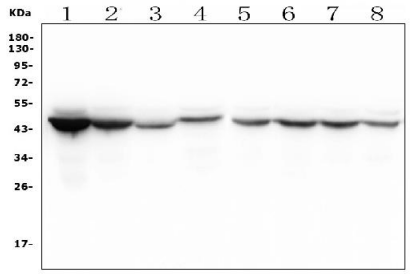
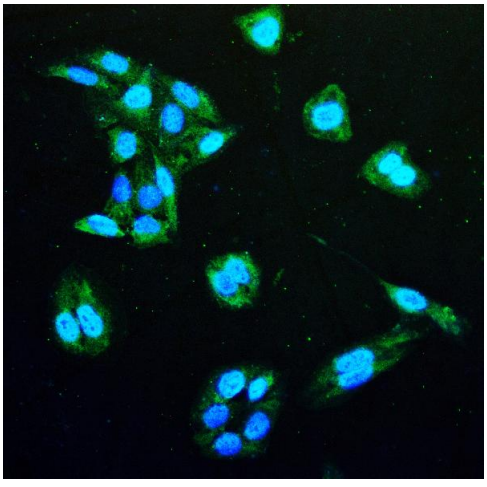
Reference

Anti-IDH1 Antibody (Clone#16H7)被引用在1文献中。

Selected Validation Data



Western blot analysis of IDH1 using anti-IDH1 antibody (M00129-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 tissue lysates,
Lane 2: human Caco-2 whole cell lysates,
Lane 3: human U-87MG whole cell lysates,
Lane 4: human THP-1 whole cell lysates,
Lane 5: human Hela whole cell lysates,
Lane 6: human K562 whole cell lysates,
Lane 7: human PC-3 whole cell lysates,
Lane 8: human HEK293 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-IDH1 antigen affinity purified monoclonal antibody (M00129-1) 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 IDH1 at approximately 47 kDa. The expected band size for IDH1 is at 47 kDa.



IF analysis of IDH1 using anti-IDH1 antibody (M00129-1).
IDH1 was detected in an immunocytochemical section of U2OS cells. The section was incubated with mouse anti-IDH1 Antibody (M00129-1) at a dilution of 1:100. Dylight488-conjugated Anti-mouse IgG Secondary Antibody (green)(Catalog#BA1126) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).

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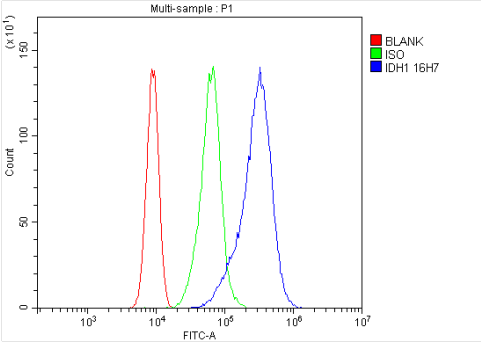

Flow Cytometry analysis of Caco-2 cells using anti-IDH1 antibody (M00129-1).
Overlay histogram showing Caco-2 cells stained with M00129-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-IDH1 Antibody (M00129-1) 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.