ARG42111
anti-IDH1 antibody [16H7]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [16H7] recognizes IDH1
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, WB
Host	Mouse
Clonality	Monoclonal
Clone	16H7
Isotype	IgG
Target Name	IDH1
Species	Human
Immunogen	Synthetic peptide corresponding to aa. 381-413 of Human IDH1. (KGLPNVQRSDYLNTFEFMDKLGENLKIKLAQAK)
Conjugation	Un-conjugated
Alternate Names	IDPC; EC 1.1.1.42; Cytosolic NADP-isocitrate dehydrogenase; IDP; HEL-S-26; HEL-216; Isocitrate dehydrogenase [NADP] cytoplasmic; IDH; PICD; IDCD; NADP; Oxalosuccinate decarboxylase

Application Instructions

Application table

Application	Dilution
FACS	1:150 - 1:500
ICC/IF	1:200 - 1:1000
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Observed Size	~ 47 kDa

Properties

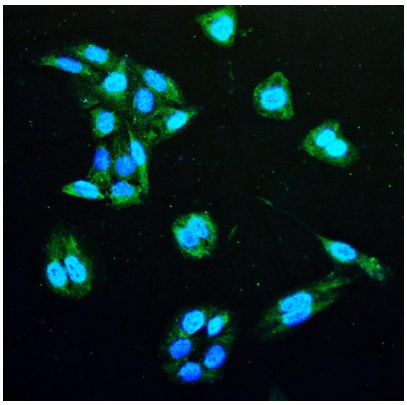
Form	Liquid
Purification	Affinity purification with immunogen.
Purity	> 95% (by SDS-PAGE)
Buffer	0.2% Na2HPO4, 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose

Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

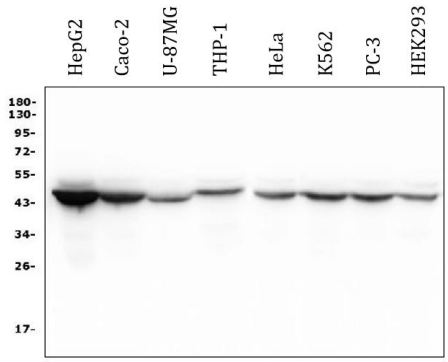
Gene Symbol	IDH1
Gene Full Name	isocitrate dehydrogenase 1 (NADP+), soluble
Background	Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other 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. [provided by RefSeq, Sep 2013]
Highlight	Related products: Isocitrate Dehydrogenase antibodies; Isocitrate Dehydrogenase ELISA Kits; Anti-Mouse IgG secondary antibodies; Related news: TCA intermediate fumarate promotes mitobiogenesis
Calculated Mw	47 kDa
PTM	Acetylation at Lys-374 dramatically reduces catalytic activity. [UniProt]
Cellular Localization	Cytoplasm. Peroxisome. [UniProt]

Images



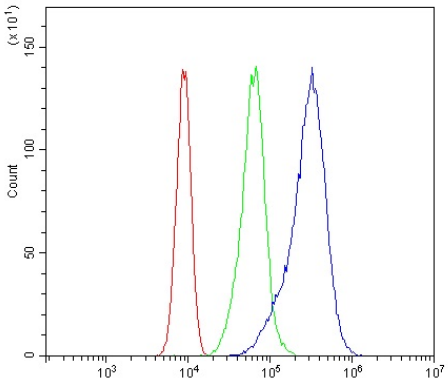
ARG42111 anti-IDH1 antibody [16H7] ICC/IF image

Immunofluorescence: U2OS cells stained with ARG42111 anti-IDH1 antibody [16H7] (green) at 2 µg/ml dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



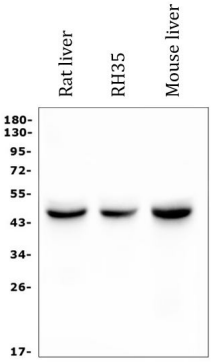
ARG42111 anti-IDH1 antibody [16H7] WB image

Western blot: 50 µg of samples under reducing conditions. HepG2, Caco-2, U-87MG, THP-1, HeLa, K562, PC-3 and HEK293 whole cell lysates stained with ARG42111 anti-IDH1 antibody [16H7] at 0.5 µg/ml dilution, overnight at 4°C.



ARG42111 anti-IDH1 antibody [16H7] FACS image

Flow Cytometry: Caco-2 cells were blocked with 10% normal goat serum and then stained with ARG42111 anti-IDH1 antibody [16H7] (blue) at 1 µg/10^6 cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was mouse IgG (1 µg/10^6 cells) used under the same conditions. Unlabelled sample (red) was also used as a control.



ARG42111 anti-IDH1 antibody [16H7] WB image

Western blot: 50 µg of samples under reducing conditions. Rat liver, Rat RH35 and Mouse liver lysates stained with ARG42111 anti-IDH1 antibody [16H7] at 0.5 µg/ml dilution, overnight at 4°C.