



Anti-IDH1 monoclonal antibody, clone 3I0 (DCABH-608)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Mouse monoclonal to Isocitrate dehydrogenase
Antigen Description	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.
Immunogen	Protein expressed in 293T cell transfected with Human Isocitrate dehydrogenase expression vector.
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human
Clone	3I0
Purity	Protein G purified

Purification	Purified from Mouse ascites fluids by affinity chromatography.
Conjugate	Unconjugated
Applications	WB, IHC-P, ICC/IF, Flow Cyt
Positive Control	WB: Isocitrate dehydrogenase transfected HEK293T cell lysate; HeLa, HT29 and MCF7 cell extracts IHC-P: Human breast, colon and endometrium tissues ICC/IF: COS7 cells transiently transfected by pCMV6-ENTRY Isocitrate dehydrogenase
Format	Liquid
Size	100 µl
Buffer	pH: 7.30; Preservative: 0.02% Sodium azide; Constituents: 48% PBS, 1% BSA, 50% Glycerol
Preservative	0.02% Sodium Azide
Storage	Store at -20°C. Stable for 12 months at -20°C

GENE INFORMATION

Gene Name	IDH1 isocitrate dehydrogenase 1 (NADP+), soluble [Homo sapiens]
Official Symbol	IDH1
Synonyms	IDH1; isocitrate dehydrogenase 1 (NADP+), soluble; isocitrate dehydrogenase [NADP] cytoplasmic; NADP(+)-specific ICDH; oxalosuccinate decarboxylase; NADP-dependent isocitrate dehydrogenase, cytosolic; NADP-dependent isocitrate dehydrogenase, peroxisomal;
Entrez Gene ID	3417
Protein Refseq	NP_005887
UniProt ID	O75874
Chromosome Location	2q32-qter
Pathway	Citrate cycle (TCA cycle), organism-specific biosystem; Citrate cycle (TCA cycle), conserved biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate, organism-specific biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate, conserved biosystem; Glutathione metabolism, organism-specific biosystem;
Function	NAD binding; isocitrate dehydrogenase (NADP+) activity; isocitrate dehydrogenase (NADP+) activity; magnesium ion binding; oxidoreductase activity; oxidoreductase activity, acting on the CH-OH group of donors, NAD or NADP as acceptor; protein homodimerizat