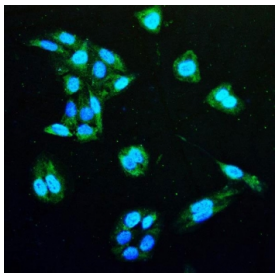
Isocitrate Dehydrogenase Antibody / IDH1 [clone 16H7] (RQ6022)

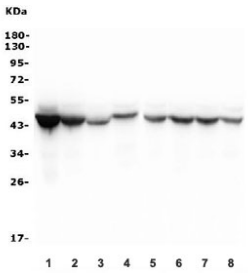
Catalog No.	Formulation	Size
RQ6022	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

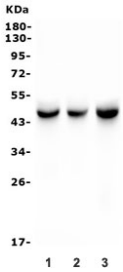
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	16H7
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	O75874
Applications	Western Blot : 0.5-1ug/ml Immunofluorescence : 2-4ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This Isocitrate Dehydrogenase antibody is available for research use only.



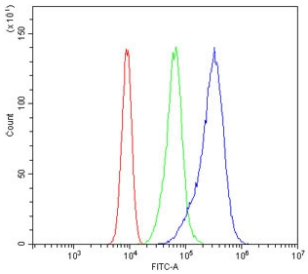
Immunofluorescent staining of FFPE human U-2 OS cells with Isocitrate Dehydrogenase antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of human 1) HepG2, 2) Caco-2, 3) U-87 MG, 4) ThP-1, 5) HeLa, 6) K562, 7) PC-3 and 8) HEK293 lysate with Isocitrate Dehydrogenase antibody. Predicted molecular weight ~46 kDa.



Western blot testing of 1) rat liver, 2) rat RH35 and 3) mouse liver lysate with Isocitrate Dehydrogenase antibody. Predicted molecular weight ~46 kDa.



Immunofluorescent staining of FFPE human Caco-2 cells with Isocitrate Dehydrogenase antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.

Description

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.

Application Notes

Optimal dilution of the Isocitrate Dehydrogenase antibody should be determined by the researcher.

Immunogen

Amino acids KGLPNVQRSDYLNTFEFMDKLGENLKIKLAQAK from the human protein were used as the immunogen for the Isocitrate Dehydrogenase antibody.

Storage

After reconstitution, the Isocitrate Dehydrogenase antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.