

Product Name: KD-Validated IDH1 Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA01764**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 46.7kDa

Antigen Information

Gene Name	IDH1 IDH1; Isocitrate Dehydrogenase (NADP(+)) 1; Isocitrate Dehydrogenase (NADP(+)) 1, Cytosolic; Isocitrate Dehydrogenase 1 (NADP+), Soluble; Isocitrate Dehydrogenase [NADP] Cytoplasmic; Oxalosuccinate Decarboxylase; NADP(+)-Specific ICDH; EC 1.1.1.42; PICD; IDH;
Alternative Names	NADP-Dependent Isocitrate Dehydrogenase, Peroxisomal; NADP-Dependent Isocitrate Dehydrogenase, Cytosolic; Epididymis Secretory Sperm Binding Protein; Cytosolic NADP-Isocitrate Dehydrogenase; Isocitrate Dehydrogenase 1 (NADP+); Epididymis Secretory Protein Li 26; Epididymis Luminal Protein 216; HEL-S-26; HEL-216; IDCD; IDPC; IDPc; IDP
Gene ID	3417.0
SwissProt ID	O75874
Immunogen	A synthesized peptide derived from human IDH1

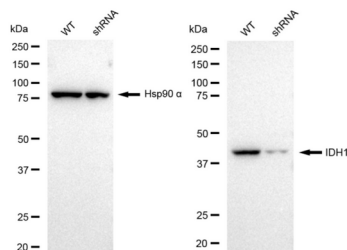
Background

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]

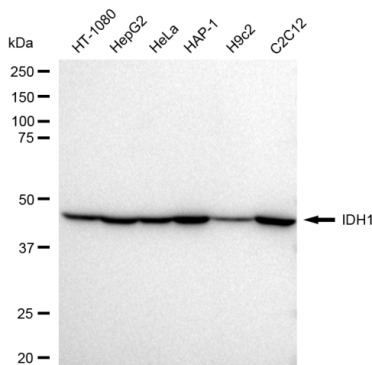
Research Area

Signal Transduction, Cancer, Metabolism, Neuroscience

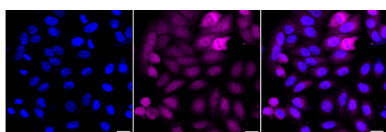
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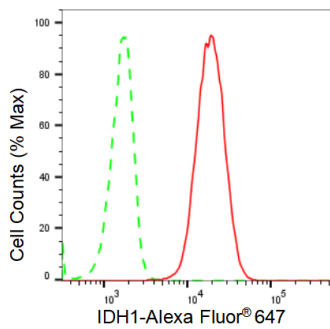
Western blotting analysis using IDH1 antibody (KVA01764). IDH1 expression in wild type (WT) and IDH1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with IDH1 antibody (KVA01764, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Western blotting analysis using IDH1 antibody (KVA01764). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with IDH1 antibody (KVA01764, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HepG2 cells with IDH1 antibody (KVA01764, 1:1,000). Nuclei were stained blue with DAPI; IDH1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser intensity and smart gain: Medium. Scale bar, 20 µm.



Flow cytometric analysis of IDH1 expression in C2C12 cells using IDH1 antibody (KVA01764, 1:2,000). Green, isotype control; red, IDH1.