

Product name:	IDH1 Rabbit Polyclonal Antibody
Cat number:	ABN12353
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	Synthesized peptide derived from the N-terminal region of human IDH1.
Reactivity:	Human, Mouse, Rat
Applications:	WB 1:500-1:2000, IHC 1:100-1:300, ICC/IF 1:50-1:200, ELISA 1:10000-1:20000
Molecular Weight:	46kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

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 catalytic activity: Isocitrate + NADP(+) = 2-oxoglutarate + CO(2) + NADPH., catalytic activity: Oxalosuccinate + NADP(+) = 2-oxoglutarate + CO(2) + NADPH., cofactor: Binds 1 magnesium or manganese ion per subunit., disease: Defects in IDH1 are a cause of glioblastoma multiforme (GBM) [MIM:137800]; also called familial glioma of brain. Gliomas are central nervous system neoplasms derived from glial cells and comprise astrocytomas, glioblastoma multiforme, oligodendrogliomas, and ependymomas., miscellaneous: Cancer mutations affecting Arg-132 are tissue-specific, and suggest that this residue plays a unique role in the development of high-grade gliomas., online information: Isocitrate dehydrogenase entry, similarity: Belongs to the isocitrate and isopropylmalate dehydrogenases family., subunit: Homodimer.,