

#3997 Store at -20°C

IDH1 Antibody



✓ 100 µl
(10 western blots)

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New 07/09

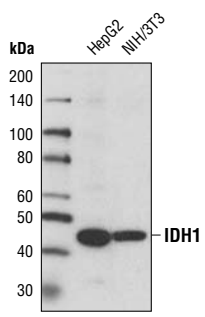
This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M	46 kDa	Rabbit**

Background: IDH1 is one of three isocitrate dehydrogenases that catalyze the oxidative decarboxylation of isocitrate to α -ketoglutarate (α -KG). These enzymes exist in two distinct subclasses that utilize either NAD or NADP(+) respectively, as an electron acceptor (1). IDH1 is the NADP(+) dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. IDH2 and 3 are mitochondrial enzymes that also function in the Krebs cycle. IDH1 is inactivated by phosphorylation at Ser113 and contains a clasp-like domain wherein both polypeptide chains in the dimer interlock (2,3). IDH1 is expressed in a wide range of species and also in organisms that lack a complete citric acid cycle. Recently, an inactivating mutation of IDH1 has been implicated in glioblastoma (4). IDH1 appears to function as a tumor suppressor that, when mutationally inactivated, contributes to tumorigenesis in part through induction of the HIF-1 pathway (5).

Specificity/Sensitivity: IDH1 Antibody detects endogenous levels of total IDH1 protein. The antibody does not cross react with IDH2.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues near the N terminus of human IDH1. Antibodies were purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from HepG2 and NIH/3T3 cells using IDH1 Antibody.

Entrez-Gene ID #3417
Swiss-Prot Acc. #075874

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.
Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western Blotting 1:1000

- Background References:**
- (1) Ramachandran, N. and Colman, R.F. (1980) *J Biol Chem* 255, 8859-64.
 - (2) Bennett, P.M. and Holms, W.H. (1975) *J Gen Microbiol* 87, 37-51.
 - (3) Hurley, J.H. et al. (1990) *Science* 249, 1012-6.
 - (4) Bleeker, F.E. et al. (2009) *Hum Mutat* 30, 7-11.
 - (5) Zhao, S. et al. (2009) *Science* 324, 261-5.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.