

#3997 Store at -20°C

IDH1 Antibody

✓ 100 µl
(10 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 04/27/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

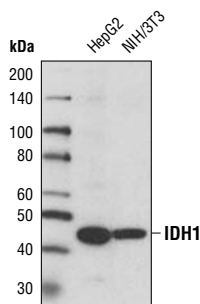
Entrez-Gene ID #3417
Swiss-Prot Acc. #075874

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 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.

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 Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.