



Rabbit Anti-IDH1 antibody

SL9634R

Product Name:	IDH1
Chinese Name:	异柠檬酸脱氢酶1抗体
Alias:	Cytosolic NADP isocitrate dehydrogenase; Cytosolic NADP-isocitrate dehydrogenase; ICDH; IDCD; IDH; IDHC; Idh1; IDHC_HUMAN; IDP; IDPC; Isocitrate dehydrogenase [NADP] cytoplasmic; Isocitrate dehydrogenase 1 (NADP+) soluble; NADP dependent isocitrate dehydrogenase cytosolic; NADP dependent isocitrate dehydrogenase peroxisomal; NADP(+)-specific ICDH; Oxalosuccinate decarboxylase; PICD.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	46kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human IDH1/Isocitrate dehydrogenase:51-150/414
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 癆 for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20癆. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 癆.
PubMed:	PubMed

The Isocitrate dehydrogenase cytoplasmic enzyme is a homodimer of 416 residues that belongs to the isocitrate and isopropylmalate dehydrogenases family. IDHC catalyzes the third step of the citric acid cycle, which involves the oxidative decarboxylation of isocitrate, forming α -ketoglutarate and CO₂ in a two step reaction. The first step involves the oxidation of isocitrate to the intermediate oxalosuccinate, while the second step involves the production of α -ketoglutarate. During this process, either NADH or NADPH is produced along with CO₂. Ca²⁺ can bind to IDHC as a complex with isocitrate, acting as a competitive inhibitor of Mg²⁺. The IDHC enzyme is inactivated by phosphorylation at Ser-113 and contains a clasp-like domain wherein both polypeptide chains in the dimer interlock. IDHC is expressed in a wide range of species and also in organisms that lack a complete citric acid cycle.

Subunit:

Homodimer.

Subcellular Location:

Cytoplasm. Peroxisome.

DISEASE:

Defects in IDH1 are involved in the development of glioma (GLM) [MIM:137800]. Gliomas are central nervous system neoplasms derived from glial cells and comprise astrocytomas, glioblastoma multiforme, oligodendrogliomas, and ependymomas. Note=Mutations affecting Arg-132 are tissue-specific, and suggest that this residue plays a unique role in the development of high-grade gliomas. Mutations of Arg-132 to Cys, His, Leu or Ser abolish magnesium binding and abolish the conversion of isocitrate to alpha-ketoglutarate. Instead, alpha-ketoglutarate is converted to R(-)-2-hydroxyglutarate. Elevated levels of R(-)-2-hydroxyglutarate are correlated with an elevated risk of malignant brain tumors.

Similarity:

Belongs to the isocitrate and isopropylmalate dehydrogenases family.

SWISS:

O75874

Gene ID:

3417

Database links:

[Entrez Gene: 3417](#)Human

[Omin: 147700](#)Human

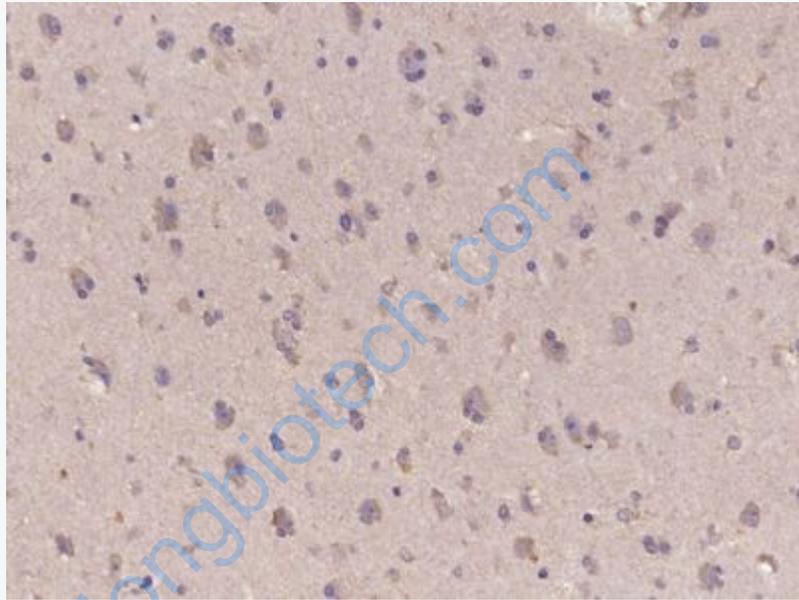
[SwissProt: O75874](#)Human

[Unigene: 593422](#)Human

Product Detail:

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (IDH1) Polyclonal Antibody, Unconjugated (SL9634R) at 1:400 overnight at 4°C, followed by conjugation to the secondary antibody (labeled with HRP) and DAB staining.