Revision 1

Enolase-1 Antibody

#3810 Store at -20C

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	47	Rabbit	#P06733	2023

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity/Sensitivity

Enolase-1 Antibody detects endogenous levels of total enolase-1 protein and does not corss-react with enolase-2.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human enolase-1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Enolase is an important glycolytic enzyme involved in the interconversion of 2-phosphoglycerate to phosphoenolpyruvate. Mammalian enolase exists as three subunits: enolase-1 (α-enolase), enolase-2 (γ-enolase) and enolase-3 (β-enolase) that can form both homo- and heterodimers. Expression of the enolase isoforms differs in a tissue specific manner (1). Enolase-1 plays a key role in anaerobic metabolism under hypoxic conditions and may act as a cell surface plasminogen receptor during tissue invasion (2,3). Abnormal expression of enolase-1 is associated with tumor progression in some cases of breast and lung cancer (4-7). Alternatively, an enolase-1 splice variant (MBP-1) binds the c-myc promoter p2 and may function as a tumor suppressor. For this reason enolase-1 is considered as a potential therapeutic target in the treatment of some forms of cancer (8).

Background References

1. Pancholi, V. (2001) *Cell Mol Life Sci* 58, 902-20.
2. Redlitz, A. et al. (1995) *Eur J Biochem* 227, 407-15.
3. Jiang, B.H. et al. (1997) *Cancer Res* 57, 5328-35.
4. Peebles, K.A. et al. (2003) *Carcinogenesis* 24, 651-7.
5. Zhang, L. et al. (2000) *J Surg Res* 93, 108-19.
6. Wu, W. et al. (2002) *Clin Exp Metastasis* 19, 319-26.
7. Hennipman, A. et al. (1988) *Tumour Biol* 9, 241-8.
8. Feo, S. et al. (2000) *FEBS Lett* 473, 47-52.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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