

# $\gamma$ Enolase (3F290): sc-71046

## BACKGROUND

Enolases have been characterized as highly conserved cytoplasmic glycolytic enzymes that may be involved in differentiation. Three isoenzymes have been identified,  $\alpha$  Enolase,  $\beta$  Enolase and  $\gamma$  Enolase.  $\alpha$  Enolase expression has been detected on most tissues, whereas  $\beta$  Enolase is expressed predominantly in muscle tissue and  $\gamma$  Enolase is detected only in nervous tissue. These isoforms exist as both homodimers and heterodimers, and they play a role in converting phosphoglyceric acid to phosphoenolpyruvic acid in the glycolytic pathway.

## REFERENCES

- Whitehead, M.C., Marangos, P.L., Connolly, S.M. and Morest, D.K. 1982. Synapse formation is related to the onset of neuron-specific Enolase immunoreactivity in the avian auditory and vestibular systems. *Dev. Neurosci.* 5: 298-307.
- Verma, M. and Dutta, S.K. 1994. DNA sequences encoding Enolase are remarkably conserved from yeast to mammals. *Life Sci.* 55: 893-899.
- Keller, A., Berod, A., Dussailant, M., Lamande, N., Gros, F. and Lucas, M. 1994. Coexpression of  $\alpha$  and  $\gamma$  Enolase genes in neurons of adult rat brain. *J. Neurosci. Res.* 38: 493-504.
- Zhang, E., Brewer, J.M., Minor, W., Carreira, L.A. and Lebioda, L. 1997. Mechanism of Enolase: the crystal structure of asymmetric dimer Enolase-2-phospho-D glycerate/Enolase-phosphoenolpyruvate at 2.0 Å resolution. *Biochemistry* 36: 12526-12534.
- Deloulme, J.C., Helies, A., Ledig, M., Lucas, M. and Sensenbrenner, M. 1997. A comparative study of the distribution of  $\alpha$  and  $\gamma$  Enolase subunits in cultured rat neural cells and fibroblasts. *Int. J. Dev. Neurosci.* 15: 183-194.
- Sensenbrenner, M., Lucas, M. and Deloulme, J.C. 1997. Expression of two neuronal markers, growth-associated protein 43 and neuron-specific Enolase, in rat glial cells. *J. Mol. Med.* 75: 653-663.

## CHROMOSOMAL LOCATION

Genetic locus: ENO2 (human) mapping to 12p13.31; Eno2 (mouse) mapping to 6 F2.

## SOURCE

$\gamma$  Enolase (3F290) is a mouse monoclonal antibody raised against amino acids 416-433 of  $\gamma$  Enolase of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

$\gamma$  Enolase (3F290) is recommended for detection of  $\gamma$  Enolase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for  $\gamma$  Enolase siRNA (h): sc-37045,  $\gamma$  Enolase siRNA (m): sc-37046,  $\gamma$  Enolase shRNA Plasmid (h): sc-37045-SH,  $\gamma$  Enolase shRNA Plasmid (m): sc-37046-SH,  $\gamma$  Enolase shRNA (h) Lentiviral Particles: sc-37045-V and  $\gamma$  Enolase shRNA (m) Lentiviral Particles: sc-37046-V.

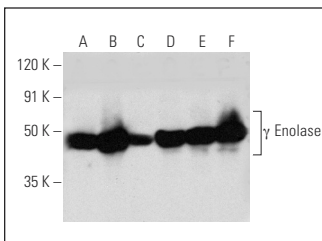
Molecular Weight of  $\gamma$  Enolase: 50 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Hep G2 cell lysate: sc-2227 or SK-N-SH cell lysate: sc-2410.

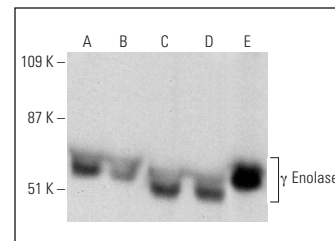
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



$\gamma$  Enolase (3F290): sc-71046. Western blot analysis of  $\gamma$  Enolase expression in Hep G2 (A), SH-SY5Y (B), HeLa (C), IMR-32 (D), U-87 MG (E) and SK-N-SH (F) whole cell lysates.



$\gamma$  Enolase (3F290): sc-71046. Western blot analysis of  $\gamma$  Enolase expression in Neuro-2A (A), EOC 20 (B), RPE-J (C) and C6 (D) whole cell lysates and mouse brain tissue extract (E).

## SELECT PRODUCT CITATIONS

- Shah, F.A., Liu, G., Al Kury, L.T., Zeb, A., Abbas, M., Li, T., Yang, X., Liu, F., Jiang, Y., Li, S. and Koh, P.O. 2019. Melatonin protects MCAO-induced neuronal loss via NR2A mediated prosurvival pathways. *Front. Pharmacol.* 10: 297.



See **Enolase (A-5): sc-271384** for Enolase antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.