SANTA CRUZ BIOTECHNOLOGY, INC.

γ Enolase (N-14): sc-31859

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The Power to Question

BACKGROUND

Enolases have been characterized as highly conserved cytoplasmic glycolytic enzymes that may be involved in differentiation. Three isoenzymes have been identified: α Enolase, β Enolase and γ Enolase. α Enolase expression has been detected on most tissues, whereas β Enolase is expressed predominantly in muscle tissue and γ 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 phosphenolpyruvic acid in the glycolytic pathway.

REFERENCES

1. Whitehead, M.C., et al. 1982. Synapse formation is related to the onset of neuron-specific Enolase immu-noreactivity in the avian auditory and vestibular systems. Dev. Neurosci. 5: 298-307.
2. Verma, M. and Dutta, S.K. 1994. DNA sequences encoding Enolase are remarkably conserved from yeast to mammals. Life Sci. 55: 893-899.
3. Keller, A., et al. 1994. Coexpression of α and γ Enolase genes in neurons of adult rat brain. J. Neurosci. Res. 38: 493-504.
4. Zhang, E., et al. 1997. Mechanism of Enolase: the crystal structure of asymmetric dimer Enolase-2-phospho-D glycerate/Enolase-phosphenolpyruvate at 2.0 A resolution. Biochemistry 36: 12526-12534.
5. Deloulme, J.C., et al. 1997. A comparative study of the distribution of α and γ Enolase subunits in cultured rat neural cells and fibroblasts. Int. J. Dev. Neurosci. 15: 183-194.
6. Sensenbrenner, M., et al. 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

γ Enolase (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of γ Enolase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31859 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

γ Enolase (N-14) is recommended for detection of γ Enolase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

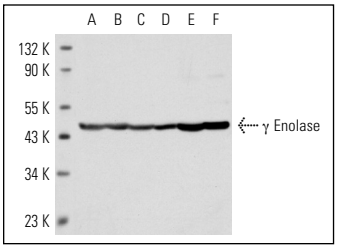
γ Enolase (N-14) is also recommended for detection of γ Enolase in additional species, including equine, canine, bovine, porcine and avian.

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

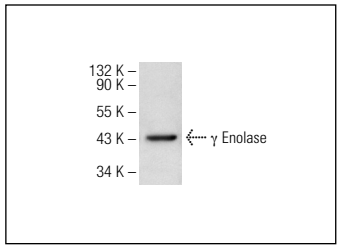
Molecular Weight of γ Enolase: 50 kDa.

Positive Controls: Y79 cell lysate: sc-2240, U-87 MG cell lysate: sc-2411 or SH-SY5Y cell lysate: sc-3812.

DATA



γ Enolase (N-14): sc-31859. Western blot analysis of γ Enolase expression in Y79 (**A**), U-87 MG (**B**) and SK-N-SH (**C**) whole cell lysates and rat pituitary (**D**), rat brain (**E**) and mouse brain (**F**) tissue extracts.



γ Enolase (N-14): sc-31859. Western blot analysis of γ Enolase expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lv, X., et al. 2008. Knockdown of Integrin β4 in primary cultured mouse neurons blocks survival and induces apoptosis by elevating NADPH oxidase activity and reactive oxygen species level. Int. J. Biochem. Cell Biol. 40: 689-699.
2. Su, L., et al. 2009. Neural stem cell differentiation is mediated by Integrin β4 *in vitro*. Int. J. Biochem. Cell Biol. 41: 916-924.
3. Yamamoto, Y., et al. 2011. Proteomic identification of protein targets for 15-deoxy-Δ(12,14)-prostaglandin J2 in neuronal plasma membrane. PLoS ONE 6: e17552.