SANTA CRUZ BIOTECHNOLOGY, INC.

α Enolase (12): sc-101514

SANTA CRUZ BIOTECHNOLOGY

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 immunoreactivity in the avian auditory and vestibular systems. Dev. Neurosci. 5: 298-307.
2. Verma, M., et al. 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.
7. Ito, S., et al. 2007. Differential expression of the human α Enolase gene in oral epithelium and squamous cell carcinoma. Cancer Sci. 98: 499-505.
8. Perconti, G., et al. 2007. The kelch protein NS1-BP interacts with α Enolase/MBP-1 and is involved in c-Myc gene transcriptional control. Biochim. Biophys. Acta 1773: 1774-1785.

CHROMOSOMAL LOCATION

Genetic locus: ENO1 (human) mapping to 1p36.23; Eno1 (mouse) mapping to 4 E2.

SOURCE

α Enolase (12) is a mouse monoclonal antibody raised against recombinant α Enolase of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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.

APPLICATIONS

α Enolase (12) is recommended for detection of α 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for α Enolase siRNA (h): sc-35310, α Enolase siRNA (m): sc-35311, α Enolase shRNA Plasmid (h): sc-35310-SH, α Enolase shRNA Plasmid (m): sc-35311-SH, α Enolase shRNA (h) Lentiviral Particles: sc-35310-V and α Enolase shRNA (m) Lentiviral Particles: sc-35311-V.

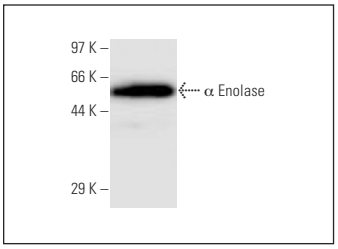
Molecular Weight of α Enolase: 47 kDa.

Positive Controls: A549 cell lysate: sc-2413 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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).

DATA



α Enolase (12): sc-101514. Western blot analysis of human recombinant α Enolase.

SELECT PRODUCT CITATIONS

1. Goichon, A., et al. 2011. Effects of an enteral glucose supply on protein synthesis, proteolytic pathways, and proteome in human duodenal mucosa. Am. J. Clin. Nutr. 94: 784-794.

RESEARCH USE

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

CONJUGATES

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.