SANTA CRUZ BIOTECHNOLOGY, INC.

α Enolase (28): sc-101515

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-phosphenol-pyruvate 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 (28) 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 (28) 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.

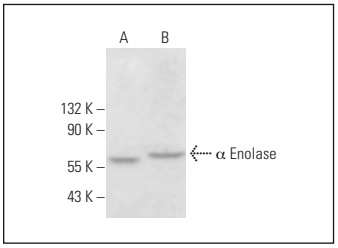
Molecular Weight of α Enolase: 47 kDa.

Positive Controls: U-937 cell lysate: sc-2239, HL-60 whole cell lysate: sc-2209 or MCF7 whole cell lysate: sc-2206.

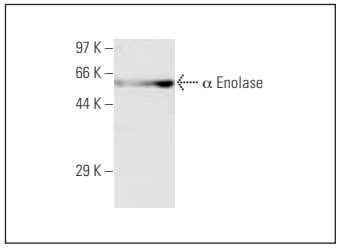
RECOMMENDED SUPPORT REAGENTS

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 (28): sc-101515. Western blot analysis of α Enolase expression in U-87 MG (**A**) and HL-60 (**B**) whole cell lysates.



α Enolase (28): sc-101515. Western blot analysis of human recombinant α Enolase.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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.