SANTA CRUZ BIOTECHNOLOGY, INC.

Enolase (C-19): sc-7455

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. The 433 amino acid protein shows 67% homology to yeast Enolase and 94% homology to rat nonneural Enolase. Studies also indicate that α Enolase is encoded by the same gene that encodes τ-crystallin, a lens structural protein.

SOURCE

Enolase (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of α 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.

Enolase (C-19) is available conjugated either fluorescein (sc-7455 FITC, 200 µg/ml), Alexa Fluor® 488 (sc-7455 AF488, 200 µg/ml) or Alexa Fluor® 647 (sc-7455 AF647, 200 µg/ml), for IF, IHC(P) and FCM.

In addition, Enolase (C-19) is available conjugated to either TRITC (sc-7455 TRITC, 200 µg/ml) or Alexa Fluor® 405 (sc-7455 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-7455 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Enolase (C-19) is recommended for detection of α Enolase, β Enolase and γ Enolase of mouse, rat, human and yeast 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).

Enolase (C-19) is also recommended for detection of α Enolase, β Enolase and γ Enolase in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Enolase: 48 kDa.

Positive Controls: Enolase (h): 293 Lysate: sc-112734, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

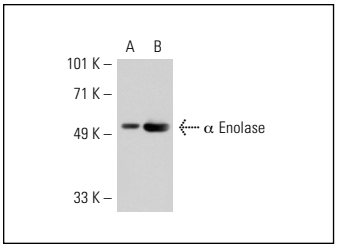
STORAGE

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

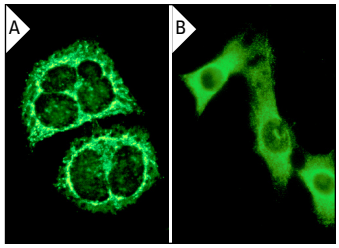
RESEARCH USE

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

DATA



Enolase (C-19): sc-7455. Western blot analysis of Enolase expression in non-transfected: sc-110760 (**A**) and human α Enolase transfected: sc-112734 (**B**) 293 whole cell lysates.



Enolase (C-19): sc-7455. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization using indirect FITC staining (**A**). Immunofluorescence staining of methanol-fixed HeLa cells using direct Alexa Fluor® 488 staining (**B**).

SELECT PRODUCT CITATIONS

1. Tanaka, S., et al. 2003. Anti-α-enolase antibodies in pituitary disease. Endocr. J. 50: 697-702.
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3. Rauch, J., et al. 2010. Heterogeneous nuclear ribonucleoprotein H blocks MST2-mediated apoptosis in cancer cells by regulating A-Raf transcription. Cancer Res. 70: 1679-1688.
4. Magli, A., et al. 2010. Proline isomerase Pin1 represses terminal differentiation and myocyte enhancer factor 2C function in skeletal muscle cells. J. Biol. Chem. 285: 34518-34527.
5. Qi, H., et al. 2010. Potential localization of putative stem/progenitor cells in human bulbar conjunctival epithelium. J. Cell. Physiol. 225: 180-185.
6. Sedoris, K.C., et al. 2010. Hypoxia induces differential translation of enolase/MBP-1. BMC Cancer 10: 157.
7. Das, S., et al. 2011. *Plasmodium falciparum* enolase complements yeast enolase functions and associates with the parasite food vacuole. Mol. Biochem. Parasitol. 179: 8-17.
8. Reinshagen, H., et al. 2011. Corneal surface reconstruction using adult mesenchymal stem cells in experimental limbal stem cell deficiency in rabbits. Acta Ophthalmol. 89: 741-748.
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