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 phosphoenolpyruvic 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.

REFERENCES


CHROMOSOMAL LOCATION

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

SOURCE

Enolase (5A4) is a mouse monoclonal antibody raised against purified neuron-specific enolase from brain of human origin.

PRODUCT

Each vial contains 100 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Enolase (5A4) is recommended for detection of neuron-specific enolase of mouse 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Enolase: 48 kDa.

Positive Controls: γ Enolase (h): 293T Lysate: sc-170262, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

DATA

Enolase (5A4): sc-51880. Western blot analysis of Enolase expression in IMR-32 (A), Hep G2 (B), A549 (C) and SH-SY5Y (D) whole cell lysates and mouse brain tissue extract (E).

SELECT PRODUCT CITATIONS


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.

PROTOCOLS

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

CONJUGATES

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