SANTA CRUZ BIOTECHNOLOGY, INC.

γ Enolase (NSE-P1): sc-21738

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.

CHROMOSOMAL LOCATION

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

SOURCE

γ Enolase (NSE-P1) is a mouse monoclonal antibody raised against amino acids 416-433 of γ 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.

γ Enolase (NSE-P1) is available conjugated to agarose (sc-21738 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-21738 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21738 PE), fluorescein (sc-21738 FITC), Alexa Fluor® 488 (sc-21738 AF488), Alexa Fluor® 546 (sc-21738 AF546), Alexa Fluor® 594 (sc-21738 AF594) or Alexa Fluor® 647 (sc-21738 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21738 AF680) or Alexa Fluor® 790 (sc-21738 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

γ Enolase (NSE-P1) 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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: IMR-32 cell lysate: sc-2409, SK-N-SH cell lysate: sc-2410 or Y79 cell lysate: sc-2240.

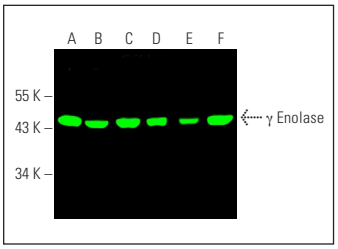
RESEARCH USE

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

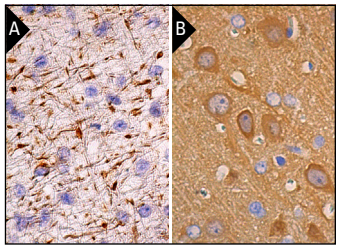
STORAGE

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

DATA



γ Enolase (NSE-P1) Alexa Fluor® 680: sc-21738 AF680. Direct near-infrared western blot analysis of γ Enolase expression in IMR-32 (**A**), Hep G2 (**B**), SH-SY5Y (**C**), SK-N-SH (**D**), Neuro-2A (**E**) and Y79 (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



γ Enolase (NSE-P1): sc-21738. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing neuropil staining (**A**). γ Enolase (NSE-P1) HRP: sc-21738 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded rat brain tissue showing cytoplasmic staining of neuronal and glial cells and neuropil staining. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, W., et al. 2006. Multilineage differentiation potential of stem cells derived from human dental pulp after cryopreservation. Tissue Eng. 12: 2813-2823.
2. Smith, W.C., et al. 2011. Interaction of arrestin with Enolase1 in photoreceptors. Invest. Ophthalmol. Vis. Sci. 52: 1832-1840.
3. Laeremans, A., et al. 2013. Protein expression dynamics during postnatal mouse brain development. J. Exp. Neurosci. 7: 61-74.
4. Luth, E.S., et al. 2015. Purification of α-synuclein from human brain reveals an instability of endogenous multimers as the protein approaches purity. Biochemistry 54: 279-292.
5. González-González, J.G., et al. 2018. Sheehan's syndrome revisited: underlying autoimmunity or hypoperfusion? Int. J. Endocrinol. 2018: 8415860.
6. Radhakrishnan, S., et al. 2019. Effect of passaging on the stemness of infrapatellar fat pad-derived stem cells and potential role of nucleostemin as a prognostic marker of impaired stemness. Mol. Med. Rep. 20: 813-829.
7. Chen, W.Y., et al. 2021. Nerve growth factor interacts with CHRM4 and promotes neuroendocrine differentiation of prostate cancer and castration resistance. Commun. Biol. 4: 22.
8. Tsai, C.M., et al. 2022. Transcranial photobiomodulation (808 nm) attenuates pentylenetetrazole-induced seizures by suppressing hippocampal neuroinflammation, astrogliosis, and microgliosis in peripubertal rats. Neurophotonics 9: 015006.

PROTOCOLS

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