elF2Bδ (m): 293T Lysate: sc-119970



The Power to Question

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex elF2B exists as a five subunit complex composed of elF2B α , elF2B β , elF2B β and elF2B ϵ . The elF2B complex catalyzes the exchange of GDP for GTP on the elF2 complex, following the interaction of elF2/GTP with the 40S ribosomal subunit. Guanine nucleotide exchange factor (GEF) activity is exhibited by the elF2B ϵ subunit alone, but is greater in the presence of all five elF2B subunits. Phosphorylation of elF2 inhibits GEF activity of elF2B, an inhibition that requires the elF2B α subunit.

REFERENCES

- Henderson, R.A., Krissansen, G.W., Yong, R.Y., Leung, E., Watson, J.D. and Dholakia, J.N. 1994. The δ-subunit of murine guanine nucleotide exchange factor eIF2B. Characterization of cDNAs predicts isoforms differing at the amino-terminal end. J. Biol. Chem. 269: 30517-30523.
- 2. Flowers, K.M., Mellor, H., Kimball, S.R. and Jefferson, L.S. 1995. Structure and sequence of the gene encoding the α -subunit of rat translation initiation factor-2B. Biochim. Biophys. Acta 1264: 163-167.
- Price, N.T., Kimball, S.R., Jefferson, L.S. and Proud, C.G. 1996. Cloning of cDNA for the γ-subunit of mammalian translation initiation factor 2B, the guanine nucleotide-exchange factor for eukaryotic initiation factor 2. Biochem. J. 318: 631-636.
- 4. Price, N.T., Mellor, H., Craddock, B.L., Flowers, K.M., Kimball, S.R., Wilmer, T., Jefferson, L.S. and Proud, C.G. 1996. eIF2B, the guanine nucleotide-exchange factor for eukaryotic initiation factor 2. Sequence conservation between the α , β and δ subunits of eIF2B from mammals and yeast. Biochem. J. 318: 637-643.
- 5. Asuru, A.I., et al. 1996. Cloning and characterization of cDNAs encoding the ϵ -subunit of eukaryotic initiation factor-2B from rabbit and human. Biochim. Biophys. Acta 1307: 309-317.
- Webb, B.L. and Proud, C.G. 1997. Eukaryotic initiation factor 2B (eIF2B). Int. J. Biochem. Cell Biol. 29: 1127-1131.
- Fabian, J.R., Kimball, S.R., Heinzinger, N.K. and Jefferson, L.S. 1997.
 Sub-unit assembly and guanine nucleotide exchange activity of eukaryotic initiation factor-2B expressed in Sf9 cells. J. Biol. Chem. 272: 12359-12365.

CHROMOSOMAL LOCATION

Genetic locus: Eif2b4 (mouse) mapping to 5 B1.

PRODUCT

elF2B δ (m): 293T Lysate represents a lysate of mouse elF2B δ transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

elF2B δ (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive elF2B δ antibodies. Recommended use: 10-20 μ l per lane.

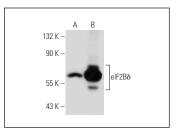
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

elF2Bδ (P-6): sc-9981 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse elF2Bδ expression in elF2Bδ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



eIF2B8 (P-6): sc-9981. Western blot analysis of eIF2B8 expression in non-transfected: sc-117752 (A) and mouse eIF2B8 transfected: sc-119970 (B) 293T whole cell Ivsates.

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.

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