

eIF2B β (E-12): sc-376478

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex eIF2B exists as a five subunit complex composed of eIF2B α , eIF2B β , eIF2B γ , eIF2B δ , and eIF2B ϵ . The eIF2B complex catalyzes the exchange of GDP for GTP on the eIF2 complex, following the interaction of eIF2/GTP with the 40S ribosomal subunit. Guanine nucleotide exchange factor (GEF) activity is exhibited by the eIF2B ϵ subunit alone, but is greater in the presence of all five eIF2B subunits. Phosphorylation of eIF2 inhibits GEF activity of eIF2B, an inhibition that requires the eIF2B α subunit.

REFERENCES

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- Flowers, K.M., et al. 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., et al. 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.
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- 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., et al. 1997. Eukaryotic initiation factor 2B (eIF2B). *Int. J. Biochem. Cell Biol.* 29: 1127-1131.
- Fabian, J.R., et al. 1997. Subunit 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: EIF2B2 (human) mapping to 14q24.3.

SOURCE

eIF2B β (E-12) is a mouse monoclonal antibody raised against amino acids 52-351 mapping at the C-terminus of eIF2B β of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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

eIF2B β (E-12) is recommended for detection of eIF2B β of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for eIF2B β siRNA (h): sc-44556, eIF2B β shRNA Plasmid (h): sc-44556-SH and eIF2B β shRNA (h) Lentiviral Particles: sc-44556-V.

Molecular Weight of eIF2B β : 39 kDa.

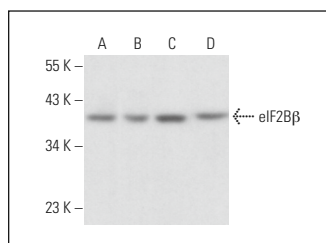
Positive Controls: MCF7 whole cell lysate: sc-2206, HUV-EC-C whole cell lysate: sc-364180 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

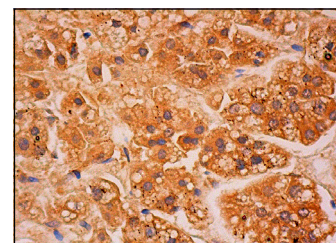
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



eIF2B β (E-12): sc-376478. Western blot analysis of eIF2B β expression in K-562 (A), HUV-EC-C (B), MCF7 (C) and BYDP (D) whole cell lysates.



eIF2B β (E-12): sc-376478. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

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.