

eIF2 β (C-9): sc-136972

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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- Ernst, H., Duncan, R.F. and Hershey, J.W. 1987. Cloning and sequencing of complementary DNAs encoding the α subunit of translational initiation factor eIF2. Characterization of the protein and its messenger RNA. J. Biol. Chem. 262: 1206-1212.
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- Gaspar, N.J., Kinzy, T.G., Scherer, B.J., Humbelin, M., Hershey, J.W. and Merrick, W.C. 1994. Translation initiation factor eIF2. Cloning and expression of the human cDNA encoding the γ subunit. J. Biol. Chem. 269: 3415-3422.

CHROMOSOMAL LOCATION

Genetic locus: EIF2S2 (human) mapping to 20q11.22; Eif2s2 (mouse) mapping to 2 H1.

SOURCE

eIF2 β (C-9) is a mouse monoclonal antibody raised against amino acids 131-333 mapping at the C-terminus of eIF2 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

eIF2 β (C-9) is recommended for detection of eIF2 β of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for eIF2 β siRNA (h): sc-35270, eIF2 β siRNA (m): sc-35271, eIF2 β shRNA Plasmid (h): sc-35270-SH, eIF2 β shRNA Plasmid (m): sc-35271-SH, eIF2 β shRNA (h) Lentiviral Particles: sc-35270-V and eIF2 β shRNA (m) Lentiviral Particles: sc-35271-V.

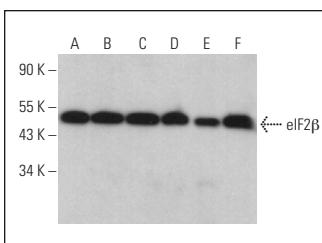
Molecular Weight of eIF2 β : 45 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

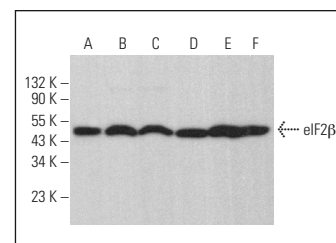
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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 MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



eIF2 β (C-9): sc-136972. Western blot analysis of eIF2 β expression in HeLa (A), Jurkat (B), K-562 (C), A-431 (D), NCI-H1299 (E) and KNRK (F) whole cell lysates.



eIF2 β (C-9): sc-136972. Western blot analysis of eIF2 β expression in MOLT-4 (A), A2058 (B), HEL 92.1.7 (C), BYDP (D), 3T3-L1 (E) and PC-12 (F) whole cell lysates.

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.