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eIF2 β (h): 293T Lysate: sc-172562

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex eIF2 exists as a heterotrimeric complex of eIF2 α , eIF2 β and eIF2 γ . eIF2 functions in the early stages of protein synthesis, by forming a ternary complex with GTP and tRNA. This complex binds to the 40S ribosomal subunit, followed by mRNA binding to 40S to form the 43S preinitiation complex, the release of eIF2 from 40S and the hydrolysis of GTP. Phosphorylation of eIF2 α correlates with inhibition of translation initiation.

REFERENCES

1. Trachsel, H. and Staehelin, T. 1978. Binding and release of eukaryotic initiation factor eIF2 and GTP during protein synthesis initiation. Proc. Natl. Acad. Sci. USA 75: 204-208.
2. Benne, R., Ames, H., Hershey, J.W. and Voorma, H.O. 1979. The activity of eukaryotic initiation factor eIF2 in ternary complex formation with GTP and Met-tRNA. J. Biol. Chem. 254: 3201-3205.
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4. Pathak, V.K., Nielsen, P.J., Trachsel, H. and Hershey, J.W. 1988. Structure of the β subunit of translational initiation factor eIF2. Cell 54: 633-639.
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CHROMOSOMAL LOCATION

Genetic locus: EIF2S2 (human) mapping to 20q11.22.

PRODUCT

eIF2 β (h): 293T Lysate represents a lysate of human eIF2 β transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

eIF2 β (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive eIF2 β antibodies. Recommended use: 10-20 μ l per lane.

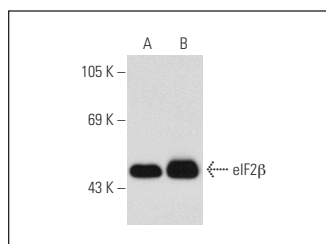
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

eIF2 β (D-3): sc-133209 is recommended as a positive control antibody for Western Blot analysis of enhanced human eIF2 β expression in eIF2 β 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-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.

DATA



eIF2 β (D-3): sc-133209. Western blot analysis of eIF2 β expression in non-transfected: sc-117752 (A) and human eIF2 β transfected: sc-172562 (B) 293T whole cell lysates.

PROTOCOLS

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