

eIF2B α (h): 293T Lysate: sc-111722

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. Defects in the gene encoding eIF2B α are a cause of leukoencephalopathy with vanishing white matter (VWM), a brain disease that is characterized by head trauma and motor deterioration.

REFERENCES

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4. Ohlenbusch, A., et al. 2005. Identification of ten novel mutations in patients with eIF2B-related disorders. *Hum. Mutat.* 25: 411.
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7. Mohammad-Qureshi, S.S., et al. 2007. Critical contacts between the eukaryotic initiation factor 2B (eIF2B) catalytic domain and both eIF2 β and -2 γ mediate guanine nucleotide exchange. *Mol. Cell. Biol.* 27: 5225-5234.
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CHROMOSOMAL LOCATION

Genetic locus: EIF2B1 (human) mapping to 12q24.31.

PRODUCT

eIF2B α (h): 293T Lysate represents a lysate of human eIF2B α 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

eIF2B α (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive eIF2B α antibodies. Recommended use: 10-20 μ l per lane.

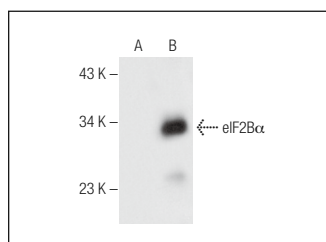
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

eIF2B α (C-11): sc-376846 is recommended as a positive control antibody for Western Blot analysis of enhanced human eIF2B α expression in eIF2B α 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



eIF2B α (C-11): sc-376846. Western blot analysis of eIF2B α expression in non-transfected: sc-117752 (A) and human eIF2B α transfected: sc-111722 (B) 293T 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.