

eIF2B ϵ (H-290): sc-28854

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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- 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.
- Price, N.T., et al. 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: EIF2B5 (human) mapping to 3q27.1; Eif2b5 (mouse) mapping to 16 A3.

SOURCE

eIF2B ϵ (H-290) is a rabbit polyclonal antibody raised against amino acids 422-711 mapping near the C-terminus of eIF2B ϵ of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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.

PROTOCOLS

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

APPLICATIONS

eIF2B ϵ (H-290) is recommended for detection of eIF2B ϵ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

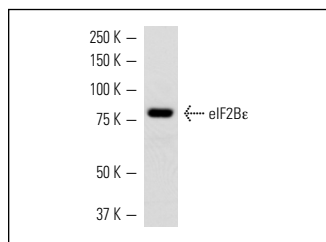
eIF2B ϵ (H-290) is also recommended for detection of eIF2B ϵ in additional species, including equine, canine and bovine.

Suitable for use as control antibody for eIF2B ϵ siRNA (h): sc-35278, eIF2B ϵ siRNA (m): sc-35279, eIF2B ϵ shRNA Plasmid (h): sc-35278-SH, eIF2B ϵ shRNA Plasmid (m): sc-35279-SH, eIF2B ϵ shRNA (h) Lentiviral Particles: sc-35278-V and eIF2B ϵ shRNA (m) Lentiviral Particles: sc-35279-V.

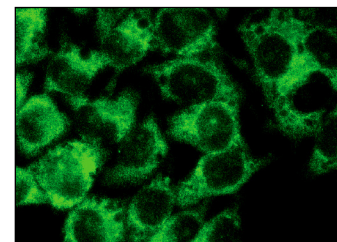
Molecular Weight of eIF2B ϵ : 90 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

DATA



eIF2B ϵ (H-290): sc-28854. Western blot analysis of eIF2B ϵ expression in HeLa whole cell lysate.



eIF2B ϵ (H-290): sc-28854. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Kantor, L., et al. 2008. A point mutation in translation initiation factor 2B leads to a continuous hyper stress state in oligodendroglial-derived cells. *PLoS ONE* 3: e3783.
- Adler, H.S., et al. 2010. Neuronal nitric oxide synthase modulates maturation of human dendritic cells. *J. Immunol.* 184: 6025-6034.

RESEARCH USE

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

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Try **eIF2B ϵ (B-7): sc-55558** or **eIF2B ϵ (H-9): sc-514056**, our highly recommended monoclonal alternatives to eIF2B ϵ (H-290).