

# eIF2B $\beta$ (H-300): sc-28852

## 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 $\alpha$ , eIF2B $\beta$ , eIF2B $\gamma$ , eIF2B $\delta$ , and eIF2B $\epsilon$ . 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 $\epsilon$  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 $\alpha$  subunit.

## REFERENCES

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- Webb, B.L. and Proud, C.G. 1997. Eukaryotic initiation factor 2B (eIF2B). *Int. J. Biochem. Cell Biol.* 29: 1127-1131.
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## CHROMOSOMAL LOCATION

Genetic locus: EIF2B2 (human) mapping to 14q24.3; Eif2b2 (mouse) mapping to 12 D2.

## SOURCE

eIF2B $\beta$  (H-300) is a rabbit polyclonal antibody raised against amino acids 52-351 mapping at the C-terminus of eIF2B $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ 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.

## APPLICATIONS

eIF2B $\beta$  (H-300) is recommended for detection of eIF2B $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 $\beta$  (H-300) is also recommended for detection of eIF2B $\beta$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for eIF2B $\beta$  siRNA (h): sc-44556, eIF2B $\beta$  siRNA (m): sc-44557, eIF2B $\beta$  shRNA Plasmid (h): sc-44556-SH, eIF2B $\beta$  shRNA Plasmid (m): sc-44557-SH, eIF2B $\beta$  shRNA (h) Lentiviral Particles: sc-44556-V and eIF2B $\beta$  shRNA (m) Lentiviral Particles: sc-44557-V.

Molecular Weight of eIF2B $\beta$ : 39 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>TM</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>TM</sup> Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

- Martin, L., et al. 2010. Regulation of the unfolded protein response by eif2B $\delta$  isoforms. *J. Biol. Chem.* 285: 31944-31953.

## RESEARCH USE

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

## PROTOCOLS

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Try **eIF2B $\beta$  (P-4): sc-9979** or **eIF2B $\beta$  (E-12): sc-376478**, our highly recommended monoclonal alternatives to eIF2B $\beta$  (H-300).