

## eIF2B $\delta$ (S-18): sc-31890

### 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 was exhibited by the eIF2B $\epsilon$  subunit alone, but it was 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

1. Henderson, R.A., et al. 1994. The  $\delta$  subunit of murine guanine nucleotide exchange factor eIF-2B. Characterization of cDNAs predicts isoforms differing at the amino-terminal end. *J. Biol. Chem.* 269: 30517-30523.
2. Flowers, K.M., et al. 1995. Structure and sequence of the gene encoding the  $\alpha$  subunit of rat translation initiation factor-2B. *Biochim. Biophys. Acta* 1264: 163-167.
3. Price, N.T., et al. 1996. Cloning of cDNA for the  $\gamma$  subunit of mammalian translation initiation factor 2B, the guanine nucleotide-exchange factor for eukaryotic initiation factor 2. *Biochem. J.* 318: 631-636.
4. Price, N.T., et al. 1996. eIF2B, the guanine nucleotide-exchange factor for eukaryotic initiation factor 2. Sequence conservation between the  $\alpha$ ,  $\beta$  and  $\delta$  subunits of eIF2B from mammals and yeast. *Biochem. J.* 318: 637-643.
5. Asuru, A.I., et al. 1996. Cloning and characterization of cDNAs encoding the  $\epsilon$  subunit of eukaryotic initiation factor-2B from rabbit and human. *Biochim. Biophys. Acta* 1307: 309-317.
6. Webb, B.L., et al. 1997. Eukaryotic initiation factor 2B (eIF2B). *Int. J. Biochem. Cell Biol.* 29: 1127-1131.
7. Fabian, J.R., et al. 1997. Subunit assembly and guanine nucleotide exchange activity of eukaryotic initiation factor-2B expressed in Sf9 cells. *J. Biol. Chem.* 272: 12359-12365.

### CHROMOSOMAL LOCATION

Genetic locus: EIF2B4 (human) mapping to 2p23.3; Eif2b4 (mouse) mapping to 5 B1.

### SOURCE

eIF2B $\delta$  (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of eIF2B $\delta$  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.

Blocking peptide available for competition studies, sc-31890 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

eIF2B $\delta$  (S-18) is recommended for detection of eIF2B $\delta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 $\delta$  (S-18) is also recommended for detection of eIF2B $\delta$  in additional species, including equine, canine and bovine.

Suitable for use as control antibody for eIF2B $\delta$  siRNA (h): sc-35276, eIF2B $\delta$  siRNA (m): sc-35277, eIF2B $\delta$  shRNA Plasmid (h): sc-35276-SH, eIF2B $\delta$  shRNA Plasmid (m): sc-35277-SH, eIF2B $\delta$  shRNA (h) Lentiviral Particles: sc-35276-V and eIF2B $\delta$  shRNA (m) Lentiviral Particles: sc-35277-V.

Molecular Weight of eIF2B $\delta$ : 60 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, COLO 320DM cell lysate: sc-2226 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.