SANTA CRUZ BIOTECHNOLOGY, INC.

eIF2β (C-15): sc-31888

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The Power to Question

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 eIF2Bα, eIF2Bβ, eIF2Bγ, eIF2Bδ, and eIF2Bε. 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 eIF2Bé 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 eIF2Bα subunit.

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., Amesz, 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.

CHROMOSOMAL LOCATION

Genetic locus: EIF2S2 (human) mapping to 20q11.22; Eif2s2 (mouse) mapping to 2 H1.

SOURCE

eIF2β (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of eIF2β of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31888 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF2β (C-15) is recommended for detection of eIF2β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

eIF2β (C-15) is also recommended for detection of eIF2β in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for eIF2β siRNA (h): sc-35270, eIF2β siRNA (m): sc-35271, eIF2β shRNA Plasmid (h): sc-35270-SH, eIF2β shRNA Plasmid (m): sc-35271-SH, eIF2β shRNA (h) Lentiviral Particles: sc-35270-V and eIF2β shRNA (m) Lentiviral Particles: sc-35271-V.

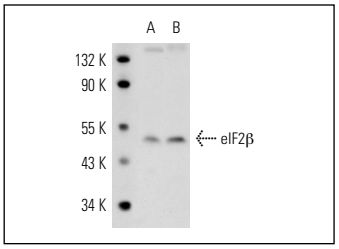
Molecular Weight of eIF2β: 45 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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 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™ Mounting Medium: sc-24941.

DATA



eIF2β (C-15): sc-31888. Western blot analysis of eIF2β expression in K-562 (**A**) and NIH/3T3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Locker, N., Chamond, N. and Sargueil, B. 2011. A conserved structure within the HIV gag open reading frame that controls translation initiation directly recruits the 40S subunit and eIF3. Nucleic Acids Res. 39: 2367-2377.

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 or our catalog for detailed protocols and support products.