SANTA CRUZ BIOTECHNOLOGY, INC.

eIF5B (C-20): sc-161555

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

In mammalian cells, translation is controlled at the level of polypeptide chain initiation by initiation factors. The eukaryotic translation initiation factor 5 (eIF5) catalyzes the hydrolysis of GTP bound to the 40S ribosomal subunit, a function necessary for the subsequent joining of the 40S and 60S subunits to form the 80S initiation complex. eIF5B (Eukaryotic translation initiation factor 5B), also known as Translation initiation factor IF-2, is a 1,120 amino acid cytoplasmic protein that functions in general translation initiation by promoting the binding of the formylmethionine-tRNA to ribosomes. eIF5B interacts with Annexin V, an anticoagulant protein, in a calcium and phospholipid-dependent manner. Since eIF5B is conserved among all three kingdoms of life, it is also known as an universal initiation factor.

REFERENCES

1. Roll-Mecak, A., et al. 2001. Engaging the ribosome: universal IFs of translation. Trends Biochem. Sci. 26: 705-709.
2. Lee, J.H., et al. 2002. Initiation factor eIF5B catalyzes second GTP-dependent step in eukaryotic translation initiation. Proc. Natl. Acad. Sci. USA 99: 16689-16694.
3. Unbehaun, A., et al. 2007. Position of eukaryotic initiation factor eIF5B on the 80S ribosome mapped by directed hydroxyl radical probing. EMBO J. 26: 3109-3123.
4. Shin, B.S. and Dever, T.E. 2007. Molecular genetic structure-function analysis of translation initiation factor eIF5B. Methods Enzymol. 429: 185-201.
5. Allen, G.S. and Frank, J. 2007. Structural insights on the translation initiation complex: ghosts of a universal initiation complex. Mol. Microbiol. 63: 941-950.
6. Jun, K.O., et al. 2008. Functional equivalence of translation factor eIF5B from *Candida albicans* and *Saccharomyces cerevisiae*. Mol. Cells 25: 172-177.

CHROMOSOMAL LOCATION

Genetic locus: EIF5B (human) mapping to 2q11.2; Eif5b (mouse) mapping to 1 B.

SOURCE

eIF5B (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of eIF5B 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-161555 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

eIF5B (C-20) is recommended for detection of eIF5B 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); non cross-reactive with eIF5A or eIF5A2.

eIF5B (C-20) is also recommended for detection of eIF5B in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for eIF5B siRNA (h): sc-94706, eIF5B siRNA (m): sc-144625, eIF5B shRNA Plasmid (h): sc-94706-SH, eIF5B shRNA Plasmid (m): sc-144625-SH, eIF5B shRNA (h) Lentiviral Particles: sc-94706-V and eIF5B shRNA (m) Lentiviral Particles: sc-144625-V.

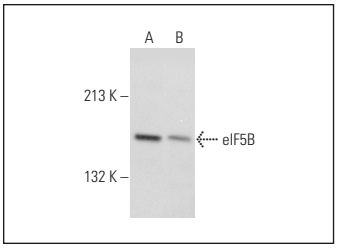
Molecular Weight of eIF5B: 175 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

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



eIF5B (C-20): sc-161555. Western blot analysis of eIF5B expression in Hep G2 (**A**) and A549 (**B**) whole cell lysates.

RESEARCH USE

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