

p-eIF4B (Ser 422): sc-293101

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. These interactions are facilitated, in part, by the eukaryotic initiation factor 4 family (eIF4) of proteins that are involved in the early initiation of protein synthesis. eIF4B (eukaryotic translation initiation factor 4B) is a 611 amino acid protein that contains one RNA recognition motif and belongs to the eIF4 protein family. Required for proper mRNA/ribosome binding, eIF4B associates with other eIF4 proteins, such as eIF4A, and promotes the ATP-dependent unwinding activity of select eukaryotic initiation factors. The gene encoding eIF4B maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Howe, J.G. and Hershey, J.W. 1984. Translational initiation factor and ribosome association with the cytoskeletal framework fraction from HeLa cells. *Cell* 37: 85-93.
2. Milburn, S.C., et al. 1990. Cloning and expression of eukaryotic initiation factor 4B cDNA: sequence determination identifies a common RNA recognition motif. *EMBO J.* 9: 2783-2790.
3. Naranda, T., et al. 1994. Two structural domains of initiation factor eIF4B are involved in binding to RNA. *J. Biol. Chem.* 269: 14465-14472.
4. Methot, N., et al. 1994. The translation initiation factor eIF4B contains an RNA-binding region that is distinct and independent from its ribonucleoprotein consensus sequence. *Mol. Cell. Biol.* 14: 2307-2316.
5. Methot, N., et al. 1996. A region rich in aspartic acid, arginine, tyrosine, and glycine (DRYG) mediates eukaryotic initiation factor 4B (eIF4B) self-association and interaction with eIF3. *Mol. Cell. Biol.* 16: 5328-5334.

CHROMOSOMAL LOCATION

Genetic locus: EIF4B (human) mapping to 12q13.13; Eif4b (mouse) mapping to 15 F3.

SOURCE

p-eIF4B (Ser 422) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 422 of eIF4B of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° 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

p-eIF4B (Ser 422) is recommended for detection of Ser 422 phosphorylated eIF4B of mouse 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for eIF4B siRNA (h): sc-77253, eIF4B siRNA (m): sc-77254, eIF4B shRNA Plasmid (h): sc-77253-SH, eIF4B shRNA Plasmid (m): sc-77254-SH, eIF4B shRNA (h) Lentiviral Particles: sc-77253-V and eIF4B shRNA (m) Lentiviral Particles: sc-77254-V.

Molecular Weight (predicted) of eIF4B: 70 kDa.

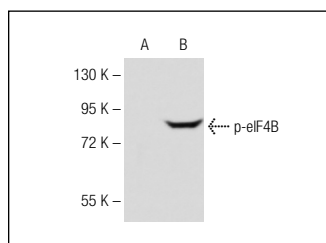
Molecular Weight (observed) of eIF4B: 80 kDa.

Positive Controls: Ramos cell lysate: sc-2216, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

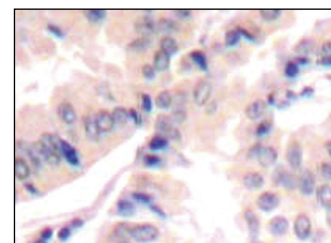
RECOMMENDED SECONDARY REAGENTS

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-eIF4B (Ser 422): sc-293101. Western blot analysis of eIF4B phosphorylation expression in untreated (A) and EGF treated (B) HeLa whole cell lysates.



p-eIF4B (Ser 422): sc-293101. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung carcinoma tissue showing cytoplasmic localization.

RESEARCH USE

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