

## eIF4B (A-2): sc-390912



The Power to Question

## 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.
6. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603928. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

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

## SOURCE

eIF4B (A-2) is a mouse monoclonal antibody raised against amino acids 105-289 mapping within an internal region of eIF4B of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of 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.

## APPLICATIONS

eIF4B (A-2) is recommended for detection of eIF4B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

eIF4B (A-2) is also recommended for detection of eIF4B in additional species, including canine.

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.

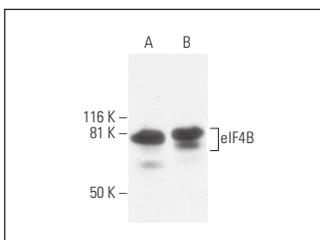
Molecular Weight of eIF4B: 80 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or MCF7 whole cell lysate: sc-2206.

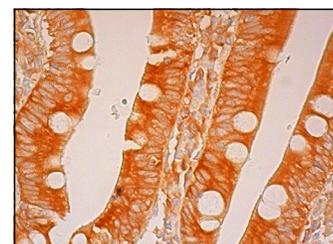
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



eIF4B (A-2): sc-390912. Western blot analysis of eIF4B expression in Ramos (A) and MCF7 (B) whole cell lysates.



eIF4B (A-2): sc-390912. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

## RESEARCH USE

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