

# eIF4AII (N-20): sc-14215

## BACKGROUND

Translation initiation in eukaryotes necessitates the assembly of an 80S ribosomal complex. Eukaryotic initiation factors (eIFs) are utilized in a sequence of reactions that leads to 80S ribosomal assembly and initiation of translation. Mammalian eukaryotic translation initiation factor 4F (eIF4F) is a protein complex that contains eIF4A, eIF4E, and eIF4G, binds mRNA at a 5'-cap motif and recruits the 43S ribosomal preinitiation complex to the eligible transcript. Along with eIF4B, the eIF4F complex mediates the unwinding of mRNA secondary structure to facilitate ribosome association. eIF4E specifically interacts with the 5' cap, eIF4A (I,II) are bidirectional RNA helicases, and eIF4G (I,II) are scaffolding proteins which coordinate eIF4E, eIF4A, eIF3, and the 40S ribosome. Human eIF4AI (eIF4A, DDX2A) is a 406 amino acid protein that is 92.7% homologous to mouse eIF4AI. The promoter region of human eIF4AI contains TATA and CAAT motifs and consensus binding sites to SP1 and AP2.

## CHROMOSOMAL LOCATION

Genetic locus: EIF4A2 (human) mapping to 3q27.3; Eif4a2 (mouse) mapping to 16 B1.

## SOURCE

eIF4AII (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of eIF4AII 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-14215 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

eIF4AII (N-20) is recommended for detection of eIF4AII 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).

eIF4AII (N-20) is also recommended for detection of eIF4AII in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for eIF4AII siRNA (h): sc-40556, eIF4AII siRNA (m): sc-40557, eIF4AII shRNA Plasmid (h): sc-40556-SH, eIF4AII shRNA Plasmid (m): sc-40557-SH, eIF4AII shRNA (h) Lentiviral Particles: sc-40556-V and eIF4AII shRNA (m) Lentiviral Particles: sc-40557-V.

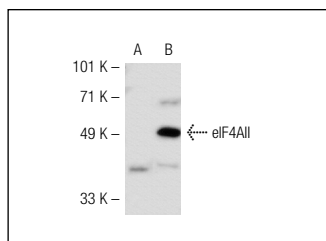
Molecular Weight of eIF4AII: 46 kDa.

Positive Controls: mouse brain extract: sc-2253, eIF4AII (h2): 293 Lysate: sc-113335 or HeLa whole cell lysate: sc-2200.

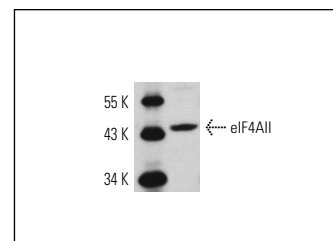
## RECOMMENDED SECONDARY REAGENTS

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



eIF4AII (N-20): sc-14215. Western blot analysis of eIF4AII expression in non-transfected: sc-110760 (A) and human eIF4AII transfected: sc-113335 (B) 293 whole cell lysates.



eIF4AII (N-20): sc-14215. Western blot analysis of eIF4AII expression in mouse brain tissue extract.

## SELECT PRODUCT CITATIONS

1. Zakowicz, H., et al. 2005. Mutational analysis of the DEAD-box RNA helicase eIF4AII characterizes its interaction with transformation suppressor Pdc4 and eIF4GI. RNA 11: 261-274.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **eIF4AII (H-5): sc-137148** or **eIF4AII (G-5): sc-137147**, our highly recommended monoclonal alternatives to eIF4AII (N-20).