

# eIF4AIII (H-50): sc-67369

## BACKGROUND

The eukaryotic translation factor 4A (eIF4A) is a member of DEA(D/H)-box RNA helicase family that couples ATP hydrolysis to RNA binding and duplex separation. eIF4A participates in the initiation of translation by unwinding secondary structure in the 5'-untranslated region of mRNAs and facilitating scanning by the 40 S ribosomal subunit for the initiation codon. eIF4AIII is a component of the exon junction complex (EJC) that assembles near exon-exon junctions of mRNAs as a result of splicing. eIF4AIII, but not eIF4AI or eIF4AII, preferentially associates with spliced mRNA. eIF4AIII is found in the nucleus whereas eIF4AI and eIF4AII are found in the cytoplasm.

## REFERENCES

1. Lomakin, I.B., et al. 2000. Physical association of eukaryotic initiation factor 4G (eIF4G) with eIF4A strongly enhances binding of eIF4G to the internal ribosomal entry site of encephalomyocarditis virus and is required for internal initiation of translation. *Mol. Cell. Biol.* 20: 6019-6029.
2. Rogers, G.W., Jr., et al. 2001. Further characterization of the helicase activity of eIF4A. Substrate specificity. *J. Biol. Chem.* 276: 12598-12608.
3. Li, W., et al. 2001. Eukaryotic initiation factors 4A (eIF4A) and 4G (eIF4G) mutually interact in a 1:1 ratio *in vivo*. *J. Biol. Chem.* 276: 29111-29115.

## CHROMOSOMAL LOCATION

Genetic locus: EIF4A3 (human) mapping to 17q25.3; Ddx48 (mouse) mapping to 11 E2.

## SOURCE

eIF4AIII (H-50) is a rabbit polyclonal antibody raised against amino acids 1-50 mapping at the N-terminus of eIF4AIII 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.

## APPLICATIONS

eIF4AIII (H-50) is recommended for detection of eIF4AIII 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), 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). eIF4AIII (H-50) is also recommended for detection of eIF4AIII in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for eIF4AIII siRNA (h): sc-44528, eIF4AIII siRNA (h): sc-44528, eIF4AIII shRNA Plasmid (h): sc-44528-SH, eIF4AIII shRNA Plasmid (h): sc-44528-SH, eIF4AIII shRNA (h) Lentiviral Particles: sc-44528-V and eIF4AIII shRNA (h) Lentiviral Particles: sc-44528-V.

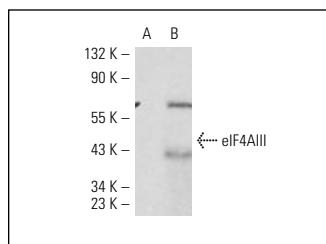
Molecular Weight of eIF4AIII: 47 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

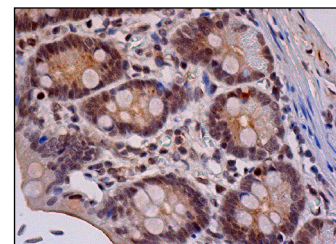
## RECOMMENDED SECONDARY REAGENTS

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 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 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



eIF4AIII (H-50): sc-67369. Western blot analysis of eIF4AIII expression in MCF7 (A) and HeLa (B) nuclear extracts.



eIF4AIII (H-50): sc-67369. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear and cytoplasmic staining of glandular cells.

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

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Try **eIF4AIII (B-2): sc-365549** or **eIF4AIII (3F1): sc-33632**, our highly recommended monoclonal alternatives to eIF4AIII (H-50).