SANTA CRUZ BIOTECHNOLOGY, INC.

eIF4A (yN-20): sc-27227

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The Power to Question

BACKGROUND

mRNA translation in eukaryotic cells involves a set of proteins termed translation initiation factors (eIFs), several of which are involved in the binding of ribosomes to mRNA. These include eIF4G, a modular scaffolding protein, and eIF4A, an RNA helicase, of which two closely related forms are known in mammals. eIF4A, in conjunction with eIF4B, catalyzes the ATP-dependent melting of RNA secondary structure in the 5'-untranslated region of mRNA during translation initiation.Th interaction of eIF4A and eIF4G is required for translation and cell growth.

REFERENCES

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2. Dominguez, D., et al. 1999. Interaction of translation initiation factor eIF4G with eIF4A in the yeast *Saccharomyces cerevisiae*. J. Biol. Chem. 274: 26720-26726.
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4. Linder, P., 2003. Yeast RNA helicases of the DEAD-box family involved in translation initiation. Biol. Cell 95:157-167.
5. He, H., et al. 2003. The yeast eukaryotic initiation factor 4G (eIF4G) HEAT domain interacts with eIF1 and eIF5 and is involved in stringent AUG selection. Mol. Cell. Biol. 23: 5431-5445.
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8. McCarthy, J.E., et al. 2002. Intracellular translation initiation factor levels in *Saccharomyces cerevisiae* and their role in cap-complex function. Mol. Microbiol. 46: 531-544.
9. Montero-Lomeli, M., et al. 2002. The initiation factor eIF4A is involved in the response to lithium stress in *Saccharomyces cerevisiae*. J. Biol. Chem. 277: 21542-21548.

SOURCE

eIF4A (yN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of eIF4A of *Saccharomyces cerevisiae* 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-27227 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

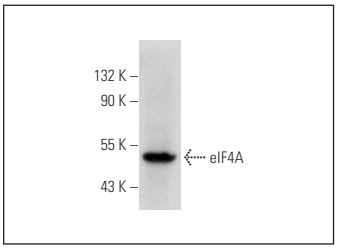
eIF4A (yN-20) is recommended for detection of eIF4A of yeast origin and eIF4AI, eIF4AII and eIF4AIII of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of 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).

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

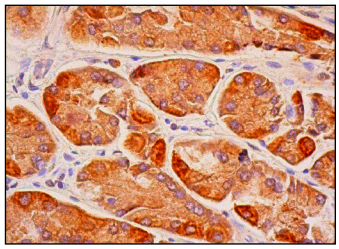
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



eIF4A (yN-20): sc-27227. Western blot analysis of eIF4A expression in K-562 whole cell lysate.



eIF4A (yN-20): sc-27227. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing 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 or our catalog for detailed protocols and support products.