

# eIF4E3 (V-12): sc-99878

## BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex eIF4F exists *in vitro* as a trimeric structure composed of eIF4G, eIF4E and eIF4A. Together, these proteins allow ribosome binding to mRNA by inducing the unwinding of mRNA secondary structures. eIF4E binds to the mRNA "cap" during an early step in the initiation of protein synthesis. eIF4A acts as an ATP-dependent RNA helicase and eIF4G acts as a bridge between eIF4E, eIF4A and the eIF3 complex. eIF4E3 (eukaryotic translation initiation factor 4E type 3) is a 224 amino acid protein that has residues that are specific for interactions with eIF4G and 4E-BP1. Also, eIF4E3 can recognize and bind the 7-methylguanosine-containing mRNA cap. There are two isoforms of eIF4E3 that exist as a result of alternative splicing events.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: EIF4E3 (human) mapping to 3p13; Eif4e3 (mouse) mapping to 6 D3.

## SOURCE

eIF4E3 (V-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of eIF4E3 of human origin.

## RESEARCH USE

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

## 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-99878 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

eIF4E3 (V-12) is recommended for detection of eIF4E3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

eIF4E3 (V-12) is also recommended for detection of eIF4E3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for eIF4E3 siRNA (h): sc-78455, eIF4E3 siRNA (m): sc-144620, eIF4E3 shRNA Plasmid (h): sc-78455-SH, eIF4E3 shRNA Plasmid (m): sc-144620-SH, eIF4E3 shRNA (h) Lentiviral Particles: sc-78455-V and eIF4E3 shRNA (m) Lentiviral Particles: sc-144620-V.

Molecular Weight of eIF4E3: 27 kDa.

## 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) 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.

## 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.