

# eIF3 $\gamma$ (H-302): sc-50355

## BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. Eukaryotic initiation factors (eIFs) are utilized in a sequence of reactions that lead to 80S ribosomal assembly and, ultimately, translation. The eukaryotic initiation factor-3 (eIF3) scaffolding structure is the largest of the eIF complexes and includes eIF3 $\alpha$ , eIF3 $\beta$ , eIF3 $\delta$ , eIF3 $\gamma$ , eIF3 $\eta$ , eIF3 $\epsilon$ , eIF3 $\theta$  and eIF3 $\zeta$ , all of which function to control the assembly of the 40S ribosomal subunit. Association of eIF3 proteins with the 40S ribosomal subunit stabilizes eIF2-GTP-Met-tRNA<sup>Met</sup> complex association and mRNA binding, and promotes dissociation of 80S ribosomes into 40S and 60S subunits, thereby promoting the assembly of the pre-initiation complex. Overexpression of eIF3 proteins is common in several cancers, suggesting a role for eIF3 proteins in tumorigenesis.

## REFERENCES

1. Valásek, L., et al. 2004. Interactions of eukaryotic translation initiation factor 3 (eIF3) subunit NIP1/c with eIF1 and eIF5 promote preinitiation complex assembly and regulate start codon selection. *Mol. Cell. Biol.* 24: 9437-9455.
2. Peterson, T.R. and Sabatini, D.M. 2005. eIF3: a connector of S6K1 to the translation preinitiation complex. *Mol. Cell* 20: 655-657.

## CHROMOSOMAL LOCATION

Genetic locus: EIF3H (human) mapping to 8q23.3; Eif3h (mouse) mapping to 15 C.

## SOURCE

eIF3 $\gamma$  (H-302) is a rabbit polyclonal antibody raised against amino acids 51-352 mapping at the C-terminus of eIF3 $\gamma$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

eIF3 $\gamma$  (H-302) is recommended for detection of eIF3 $\gamma$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

eIF3 $\gamma$  (H-302) is also recommended for detection of eIF3 $\gamma$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for eIF3 $\gamma$  siRNA (h): sc-40549, eIF3 $\gamma$  siRNA (m): sc-60048, eIF3 $\gamma$  shRNA Plasmid (h): sc-40549-SH, eIF3 $\gamma$  shRNA Plasmid (m): sc-60048-SH, eIF3 $\gamma$  shRNA (h) Lentiviral Particles: sc-40549-V and eIF3 $\gamma$  shRNA (m) Lentiviral Particles: sc-60048-V.

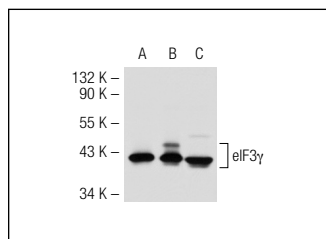
Molecular Weight of eIF3 $\gamma$ : 40 kDa.

Positive Controls: eIF3 $\gamma$  (h): 293T Lysate: sc-111538, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



eIF3 $\gamma$  (H-302): sc-50355. Western blot analysis of eIF3 $\gamma$  expression in non-transfected 293T: sc-117752 (A), human eIF3 $\gamma$  transfected 293T: sc-111538 (B) and MCF7 (C) whole cell lysates.

## 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 **eIF3 $\gamma$  (E-10): sc-271283**, our highly recommended monoclonal alternative to eIF3 $\gamma$  (H-302).