

eIF3 ϵ (H-20): sc-30247

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 α , eIF3 β , eIF3 γ , eIF3 δ , eIF3 ϵ , eIF3 ζ , eIF3 η and eIF3 θ , 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^{iMet} 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

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2. Peterson, T.R. and Sabatini, D.M. 2005. eIF3: a connectTOR of S6K1 to the translation preinitiation complex. *Mol. Cell* 20: 655-657.
3. Dong, Z. and Zhang, J.T. 2006. Initiation factor eIF3 and regulation of mRNA translation, cell growth, and cancer. *Crit. Rev. Oncol. Hematol.* 59: 169-180.
4. LeFebvre, A.K., Korneeva, N.L., Trutschl, M., Cvek, U., Duzan, R.D., Bradley, C.A., Hershey, J.W. and Rhoads, R.E. 2006. Translation initiation factor eIF4G-1 binds to eIF3 through the eIF3 ϵ subunit. *J. Biol. Chem.* 281: 22917-22932.
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CHROMOSOMAL LOCATION

Genetic locus: EIF3S5 (human) mapping to 11p15.4; Eif3s5 (mouse) mapping to 7 E3.

SOURCE

eIF3 ϵ (H-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of eIF3 ϵ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-30247 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

eIF3 ϵ (H-20) is recommended for detection of eIF3 ϵ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 ϵ (H-20) is also recommended for detection of eIF3 ϵ in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for eIF3 ϵ siRNA (h): sc-105324, eIF3 ϵ siRNA (m): sc-144615, eIF3 ϵ shRNA Plasmid (h): sc-105324-SH, eIF3 ϵ shRNA Plasmid (m): sc-144615-SH, eIF3 ϵ shRNA (h) Lentiviral Particles: sc-105324-V and eIF3 ϵ shRNA (m) Lentiviral Particles: sc-144615-V.

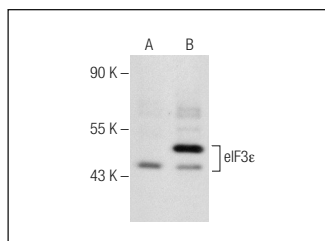
Molecular Weight of eIF3 ϵ : 52 kDa.

Positive Controls: eIF3 ϵ (h): 293T Lyaste: sc-371433.

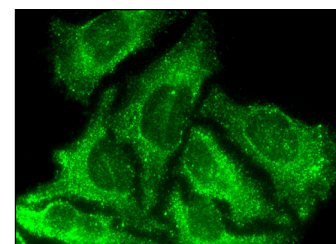
RECOMMENDED SECONDARY REAGENTS

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



eIF3 ϵ (H-20): sc-30247. Western blot analysis of eIF3 ϵ expression in non-transfected: sc-117752 (A) and human eIF3 ϵ transfected: sc-371433 (B) 293T whole cell lysates.



eIF3 ϵ (H-20): sc-30247. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

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Try **eIF3 ϵ (G-7): sc-390413** or **eIF3 ϵ (H-4): sc-514292**, our highly recommended monoclonal alternatives to eIF3 ϵ (H-20).