

eIF3 η (N-20): sc-16377

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^{Met} 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.

CHROMOSOMAL LOCATION

Genetic locus: EIF3B (human) mapping to 7p22.3; Eif3b (mouse) mapping to 5 G2.

SOURCE

eIF3 η (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of eIF3 η 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-16377 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF3 η (N-20) is recommended for detection of eIF3 η 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).

Suitable for use as control antibody for eIF3 η siRNA (h): sc-35280, eIF3 η siRNA (m): sc-35281, eIF3 η shRNA Plasmid (h): sc-35280-SH, eIF3 η shRNA Plasmid (m): sc-35281-SH, eIF3 η shRNA (h) Lentiviral Particles: sc-35280-V and eIF3 η shRNA (m) Lentiviral Particles: sc-35281-V.

Molecular Weight of eIF3 η : 116 kDa.

Positive Controls: eIF3 η (m): 293T Lysate: sc-119982, A-431 nuclear extract: sc-2122 or Jurkat nuclear extract: sc-2132.

RESEARCH USE

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

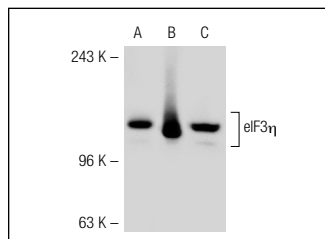
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

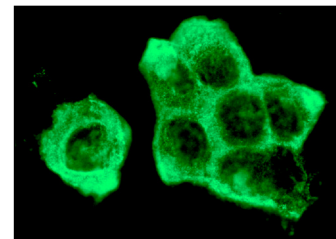
STORAGE

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

DATA



eIF3 η (N-20): sc-16377. Western blot analysis of eIF3 η expression in non-transfected: sc-117752 (A) and mouse eIF3 η transfected: sc-119982 (B) 293T whole cell lysates and Jurkat nuclear extract (C).



eIF3 η (N-20): sc-16377. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Stoecklin, G., et al. 2004. MK2-induced tristetraprolin: 14-3-3 complexes prevent stress granule association and ARE-mRNA decay. *EMBO J.* 23: 1313-1324.
2. Ozgur, S., et al. 2010. Human Pat1b connects deadenylation with mRNA decapping and controls the assembly of processing bodies. *Mol. Cell. Biol.* 30: 4308-4323.
3. Liu-Yesucevitz, L., et al. 2010. Tar DNA binding protein-43 (TDP-43) associates with stress granules: analysis of cultured cells and pathological brain tissue. *PLoS ONE* 5: e13250.
4. Goodier, J.L., et al. 2010. Discrete subcellular partitioning of human retro-transposon RNAs despite a common mechanism of genome insertion. *Hum. Mol. Genet.* 19: 1712-1725.
5. Sertie, A.L., et al. 2010. Collybistin and gephyrin are novel components of the eukaryotic translation initiation factor 3 complex. *BMC Res. Notes* 3: 242.
6. Kharraz, Y., et al. 2010. Impaired embryonic development in mice overexpressing the RNA-binding protein TIAR. *PLoS ONE* 5: e11352.
7. Kino, Y., et al. 2011. Intracellular localization and splicing regulation of FUS/TLS are variably affected by amyotrophic lateral sclerosis-linked mutations. *Nucleic Acids Res.* 39: 2781-2798.
8. Borghese, F. and Michiels, T. 2011. The leader protein of cardioviruses inhibits stress granule assembly. *J. Virol.* 85: 9614-9622.

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