

eIF3 η (C-5): sc-137214

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.

CHROMOSOMAL LOCATION

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

SOURCE

eIF3 η (C-5) is a mouse monoclonal antibody raised against amino acids 131-300 mapping within an internal region of eIF3 η of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

eIF3 η (C-5) is available conjugated to agarose (sc-137214 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137214 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137214 PE), fluorescein (sc-137214 FITC), Alexa Fluor[®] 488 (sc-137214 AF488), Alexa Fluor[®] 546 (sc-137214 AF546), Alexa Fluor[®] 594 (sc-137214 AF594) or Alexa Fluor[®] 647 (sc-137214 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-137214 AF680) or Alexa Fluor[®] 790 (sc-137214 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

eIF3 η (C-5) is recommended for detection of eIF3 η of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

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.

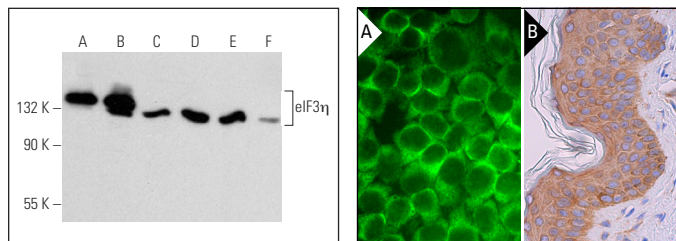
Molecular Weight of eIF3 η : 116 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

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 (C-5): sc-137214. Western blot analysis of eIF3 η expression in HISM (A), HeLa (B), NIH/3T3 (C), RAW 264.7 (D), KNRK (E) and L8 (F) whole cell lysates.

eIF3 η (C-5): sc-137214. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes and fibroblasts (B).

SELECT PRODUCT CITATIONS

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- Hans, F., et al. 2020. Multiple distinct pathways lead to hyperubiquitylated insoluble TDP-43 protein independent of its translocation into stress granules. *J. Biol. Chem.* 295: 673-689.
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- Cascella, R., et al. 2022. A quantitative biology approach correlates neuronal toxicity with the largest inclusions of TDP-43. *Sci. Adv.* 8: eabm6376.
- Maharana, S., et al. 2022. SAMHD1 controls innate immunity by regulating condensation of immunogenic self RNA. *Mol. Cell* 82: 3712-3728.e10.
- Wang, T., et al. 2022. Intracellular energy controls dynamics of stress-induced ribonucleoprotein granules. *Nat. Commun.* 13: 5584.

RESEARCH USE

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

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