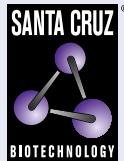


elf2 α (G-12): sc-133227



The Power to Question

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex is composed of three subunits, designated elf2 α , elf2 β and elf2 γ (eukaryotic translation initiation factor 2 α , β and γ , respectively), all of which work in concert to form a ternary complex with GTP and tRNA in the early stages of protein synthesis. elf2 α , also known as EIF2S1 or EIF2, is a 315 amino acid subunit of the eukaryotic initiation complex that functions to bind tRNA to the 40S ribosomal subunit (in a GTP-dependent manner), thereby initiating translation. In addition, the phosphorylation state of elf2 α controls the rate of tRNA translation. When elf2 α is not phosphorylated, translation occurs at a normal rate. However, upon phosphorylation by one of several kinases, elf2 α is stabilized, thus preventing the GDP/GTP exchange reaction and slowing translation.

CHROMOSOMAL LOCATION

Genetic locus: EIF2S1 (human) mapping to 14q23.3; Eif2s1 (mouse) mapping to 12 C3.

SOURCE

elf2 α (G-12) is a mouse monoclonal antibody raised against amino acids 1-315 representing full length elf2 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

elf2 α (G-12) is recommended for detection of elf2 α 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 elf2 α siRNA (h): sc-35272, elf2 α siRNA (m): sc-35273, elf2 α shRNA Plasmid (h): sc-35272-SH, elf2 α shRNA Plasmid (m): sc-35273-SH, elf2 α shRNA (h) Lentiviral Particles: sc-35272-V and elf2 α shRNA (m) Lentiviral Particles: sc-35273-V.

Molecular Weight of elf2 α : 36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

STORAGE

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

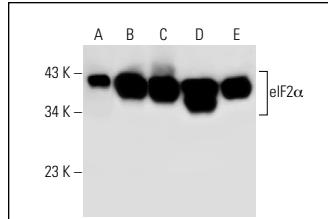
PROTOCOLS

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

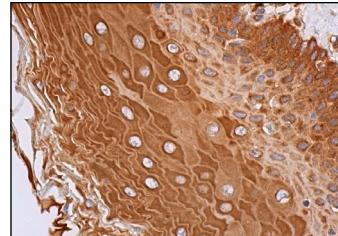
RESEARCH USE

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

DATA



elf2 α (G-12): sc-133227. Western blot analysis of elf2 α expression in 293T (A), HeLa (B), K-562 (C), NIH/3T3 (D) and KNRK (E) whole cell lysates.



elf2 α (G-12): sc-133227. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

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- Guo, X., et al. 2019. Hepatitis C virus infection induces endoplasmic reticulum stress and apoptosis in human fetal liver stem cells. *J. Pathol.* 248: 155-163.
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- Choi, S.W., et al. 2023. Adipokine gremlin-1 promotes hepatic steatosis via upregulation of ER stress by suppressing autophagy-mediated signaling. *J. Cell. Physiol.* 238: 966-975.



See **elf2 α (D-3): sc-133132** for elf2 α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.