

eIF2S3 (N-13): sc-131150

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 eIF2 α , eIF2 β and eIF2 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. eIF2S3 (eukaryotic translation initiation factor 2, subunit 3), also known as eIF2G, is a 472 amino acid protein that belongs to the γ subfamily of GTP-binding elongation factor proteins. Existing as a heterotrimer composed of an α , β and γ chain, eIF2S3 functions to bind ribosomal subunits and catalyze the subsequent formation of preinitiation complexes necessary for protein synthesis.

REFERENCES

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2. Gaspar, N.J., et al. 1994. Translation initiation factor eIF2. Cloning and expression of the human cDNA encoding the γ subunit. *J. Biol. Chem.* 269: 3415-3422.
3. Ehrmann, I.E., et al. 1998. Characterization of genes encoding translation initiation factor eIF2 γ in mouse and human: sex chromosome localization, escape from X-inactivation and evolution. *Hum. Mol. Genet.* 7: 1725-1737.
4. Ben-Asouli, Y., et al. 2000. Recognition of 5'-terminal TAR structure in human immunodeficiency virus-1 mRNA by eukaryotic translation initiation factor 2. *Nucleic Acids Res.* 28: 1011-1018.
5. Kruger, M., et al. 2000. Identification of eIF2 β and eIF2 γ as cofactors of hepatitis C virus internal ribosome entry site-mediated translation using a functional genomics approach. *Proc. Natl. Acad. Sci. USA* 97: 8566-8571.
6. Suragani, R.N., et al. 2005. Interaction of recombinant human eIF2 subunits with eIF2B and eIF2 α kinases. *Biochem. Biophys. Res. Commun.* 338: 1766-1772.
7. Mikami, S., et al. 2006. An efficient mammalian cell-free translation system supplemented with translation factors. *Protein Expr. Purif.* 46: 348-357.

CHROMOSOMAL LOCATION

Genetic locus: EIF2S3 (human) mapping to Xp22.11; Eif2s3x (mouse) mapping to X C3.

SOURCE

eIF2S3 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of eIF2S3 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-131150 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF2S3 (N-13) is recommended for detection of eIF2S3 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).

eIF2S3 (N-13) is also recommended for detection of eIF2S3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for eIF2S3 siRNA (h): sc-91300, eIF2S3 siRNA (m): sc-144613, eIF2S3 shRNA Plasmid (h): sc-91300-SH, eIF2S3 shRNA Plasmid (m): sc-144613-SH, eIF2S3 shRNA (h) Lentiviral Particles: sc-91300-V and eIF2S3 shRNA (m) Lentiviral Particles: sc-144613-V.

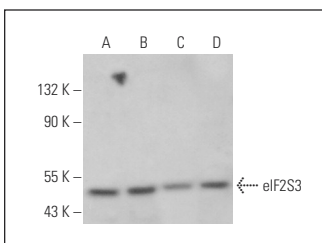
Molecular Weight of eIF2S3: 52 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or A549 cell lysate: sc-2413.

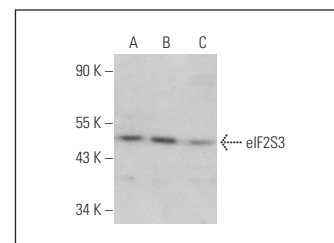
RECOMMENDED SECONDARY REAGENTS

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



eIF2S3 (N-13): sc-131150. Western blot analysis of eIF2S3 expression in COLO 320DM (A), HeLa (B), U-937 (C) and A549 (D) whole cell lysates.



eIF2S3 (N-13): sc-131150. Western blot analysis of eIF2S3 expression in RAW 309 Crat 1 (A), Jurkat (B) and NIH/3T3 (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.