

eIF5A (L-20): sc-18938

BACKGROUND

In mammalian cells, translation is controlled at the level of polypeptide chain initiation by eukaryotic initiation factors. The human eukaryotic translation initiation factor 5A gene, also designated eIF-4D or eIF5A1, maps to chromosome 17p13.1 and encodes a 154 amino acid protein that is linked to cellular polyamine homeostasis. eIF5A1 localizes to the nuclear and cytoplasmic compartments of mammalian cells where it can stimulate ribosomal peptidyl-transferase and may be involved in nucleocytoplasmic mRNA transport and/or protein translation. eIF5A1 contains a unique spermidine-derived post-translational modification at Lys-50, hypusine, which is necessary for eIF5A1's biochemical activity and for cellular proliferative signaling. In addition, eIF5A1 is a cellular cofactor for the function of the Rev transactivator protein of human immunodeficiency virus type 1 (HIV-1). Inhibition of eIF5A1 interaction with Rev leads to a block of the viral replication cycle. A highly-conserved protein that is found in all living organisms, eIF5A2 (eukaryotic translation initiation factor 5A-2) is a 153 amino acid protein that has 94% sequence similarity to eIF5A1 and also shares the hypusine residue. Amplification of the gene encoding eIF5A2 is observed in ovarian carcinomas and overexpression of eIF5A2 is linked to advanced stages of ovarian cancers.

REFERENCES

1. Smit-McBride, Z., et al. 1989. Sequence determination and cDNA cloning of eukaryotic initiation factor 4D, the hypusine-containing protein. *J. Biol. Chem.* 264: 1578-1583.
2. Hershey, J.W. 1991. Translational control in mammalian cells. *Annu. Rev. Biochem.* 60: 717-755.

SOURCE

eIF5A (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of eIF5A1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18938 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF5A (L-20) is recommended for detection of eIF5A1 and eIF5A1 of human origin, and, to a lesser extent, eIF5A2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

eIF5A (L-20) is also recommended for detection of eIF5A1, eIF5A1, and, to a lesser extent, eIF5A2 in additional species, including equine, canine, bovine, porcine and avian.

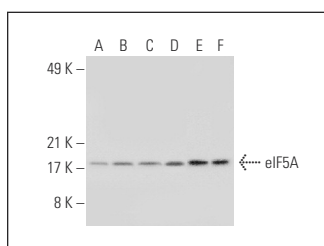
Molecular Weight of eIF5A: 17 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

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) 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



eIF5A (L-20): sc-18938. Western blot analysis of eIF5A expression in Jurkat (A), HUV-EC-C (B), MOLT-4 (C), MCF7 (D), HEK293 (E) and HeLa (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2003. Tyrosine phosphorylation of QKI mediates developmental signals to regulate mRNA metabolism. *EMBO J.* 22: 1801-1810.
2. Chen, G., et al. 2003. Proteomic analysis of eIF5A in lung adenocarcinomas. *Proteomics* 3: 496-504.

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.

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **eIF5A (H-8): sc-390202** or **eIF5A (C-1): sc-390062**, our highly recommended monoclonal alternatives to eIF5A (L-20).