SANTA CRUZ BIOTECHNOLOGY, INC.

eIF5A (C-20): sc-18939

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 17p131 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 peptidyltransferase 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.

CHROMOSOMAL LOCATION

Genetic locus: EIF5A (human) mapping to 17p13.1, EIF5AL1 (human) mapping to 10q22.3; Eif5a (mouse) mapping to 11 B3.

SOURCE

eIF5A (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-18939 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF5A (C-20) is recommended for detection of eIF5A1 of mouse, rat and human origin, and eIF5AL1 of 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), 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); may cross-react with eIF5A2.

eIF5A (C-20) is also recommended for detection of eIF5A1 and eIF5AL1 of in additional species, including equine, canine, bovine and porcine.

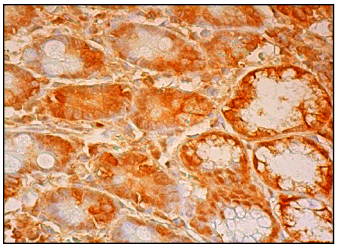
Suitable for use as control antibody for eIF5A1 siRNA (m): sc-40560, eIF5A1 shRNA Plasmid (m): sc-40560-SH and eIF5A1 shRNA (m) Lentiviral Particles: sc-40560-V.

Molecular Weight of eIF5A: 17 kDa.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



eIF5A (C-20): sc-18939. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Konstantakopoulos, N., et al. 2006. Changes in gene expressions elicited by physiological concentrations of Genistein on human endometrial cancer cells. Mol. Carcinog. 45: 752-763.

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.