SANTA CRUZ BIOTECHNOLOGY, INC.

IF2 (H-300): sc-98288

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. IF2, also known as MTIF2 (mitochondrial translational initiation factor 2), is a 727 amino acid protein that localizes to mitochondria and is expressed ubiquitously, with highest expression in skeletal muscle. Functioning as a monomer, IF2 exists as an essential component of protein synthesis, specifically promoting the GTP-dependent binding of initiator tRNA to the ribosome and possibly playing a role in the formation of the 70S ribosomal complex. The gene encoding IF2 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MTIF2 (human) mapping to 2p16.1; Mtif2 (mouse) mapping to 11 A3.3.

SOURCE

IF2 (H-300) is a rabbit polyclonal antibody raised against amino acids 428-727 mapping at the C-terminus of IF2 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.

APPLICATIONS

IF2 (H-300) is recommended for detection of IF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

IF2 (H-300) is also recommended for detection of IF2 in additional species, including equine and porcine.

Suitable for use as control antibody for IF2 siRNA (h): sc-94300, IF2 siRNA (m): sc-146149, IF2 shRNA Plasmid (h): sc-94300-SH, IF2 shRNA Plasmid (m): sc-146149-SH, IF2 shRNA (h) Lentiviral Particles: sc-94300-V and IF2 shRNA (m) Lentiviral Particles: sc-146149-V.

Molecular Weight of IF2: 81 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.