SANTA CRUZ BIOTECHNOLOGY, INC.

4E-BP3 (N-14): sc-162464

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BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. These interactions are facilitated, in part, by the eukaryotic initiation factor 4 family (eIF4) of proteins that are involved in the early initiation of protein synthesis. 4E-BP3, also known as EIF4EBP3 (eukaryotic translation initiation factor 4E binding protein 3), is a 100 amino acid protein that belongs to the eIF4E-binding protein family. Highly expressed in heart, kidney, pancreas and skeletal muscle and present at lower levels in thymus and brain, 4E-BP3 interacts with eIF4E and, via this interaction, regulates eIF4E activity, specifically by preventing the incorporation of eIF4E into the eIF4 complex. 4E-BP3 is subject to post-translational phosphorylation and is encoded by a gene which maps to human chromosome 5.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: EIF4EBP3 (human) mapping to 5q31.3; Eif4ebp3 (mouse) mapping to 18 B2.

SOURCE

4E-BP3 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of 4E-BP3 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-162464 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

4E-BP3 (N-14) is recommended for detection of 4E-BP3 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); non cross-reactive with 4E-BP1 or 4E-BP2.

4E-BP3 (N-14) is also recommended for detection of 4E-BP3 in additional species, including canine.

Suitable for use as control antibody for 4E-BP3 siRNA (h): sc-91863, 4E-BP3 siRNA (m): sc-140334, 4E-BP3 shRNA Plasmid (h): sc-91863-SH, 4E-BP3 shRNA Plasmid (m): sc-140334-SH, 4E-BP3 shRNA (h) Lentiviral Particles: sc-91863-V and 4E-BP3 shRNA (m) Lentiviral Particles: sc-140334-V.

Molecular Weight of 4E-BP3: 15 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.

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.