SANTA CRUZ BIOTECHNOLOGY, INC.

EF-CAB4B (D-15): sc-167721

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EF-CAB4B (EF-hand calcium-binding domain-containing protein 4B), also known as CRACR2A (calcium release-activated calcium channel regulator 2A), is a 395 amino acid protein belonging to the EF-CAB4 family. Localizing to cytoplasm, EF-CAB4B contains two EF-hand domains and exists as two alternatively spliced isoforms. At low Ca^{2+} concentrations, EF-CAB4B acts as a calcium-sensor, facilitating the clustering of Orai1 and Stim1 at the junctional regions between plasma membrane and endoplasmic reticulum, leading to regulation of CRAC channel activation. The gene encoding EF-CAB4B maps to human chromosome 12p13.32. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12 including hypochondrogenesis, achondrogenesis and Kniest dysplasia.

REFERENCES

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4. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
5. Dwyer, E., et al. 2010. Genotype-phenotype correlation in DTDST dysplasias: Atelosteogenesis type II and diastrophic dysplasia variant in one family. Am. J. Med. Genet. A 152A: 3043-3050.
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CHROMOSOMAL LOCATION

Genetic locus: EFCAB4B (human) mapping to 12p13.32; Efcab4b (mouse) mapping to 6 F3.

SOURCE

EF-CAB4B (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EF-CAB4B of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-167721 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EF-CAB4B (D-15) is recommended for detection of EF-CAB4B 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 EF-CAB4A.

EF-CAB4B (D-15) is also recommended for detection of EF-CAB4B in additional species, including bovine and porcine.

Suitable for use as control antibody for EF-CAB4B siRNA (h): sc-96150, EF-CAB4B siRNA (m): sc-143304, EF-CAB4B shRNA Plasmid (h): sc-96150-SH, EF-CAB4B shRNA Plasmid (m): sc-143304-SH, EF-CAB4B shRNA (h) Lentiviral Particles: sc-96150-V and EF-CAB4B shRNA (m) Lentiviral Particles: sc-143304-V.

Molecular Weight of EF-CAB4B: 46 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.

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.