SANTA CRUZ BIOTECHNOLOGY, INC.

EF-CAB4A (A-17): sc-246509

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EF-CAB4A (EF-hand calcium-binding domain-containing protein 4A), also known as CRACR2B (calcium release-activated calcium channel regulator 2B), is a 399 amino acid protein belonging to the EFCAB4 family. Containing two EF-hand domains, EF-CAB4A may be involved in store-operated Ca^{2+} entry (SOCE). EF-CAB4A exists as three alternatively spliced isoforms, and is encoded by a gene mapping to human chromosome 11p15.5. With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. Wilms' tumors, WAGR syndrome and Denys-Drash syndrome are associated with mutations of the WT1 gene. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11.

REFERENCES

1. Grossfeld, P.D., et al. 2004. The 11q terminal deletion disorder: a prospective study of 110 cases. Am. J. Med. Genet. A 129A: 51-61.
2. Simonaro, C.M., et al. 2006. Imprinting at the SMPD1 locus: implications for acid sphingomyelinase-deficient Niemann-Pick disease. Am. J. Hum. Genet. 78: 865-870.
3. Zehelein, J., et al. 2006. Skipping of Exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. J. Biol. Chem. 281: 35397-35403.
4. Taylor, T.D., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. Nature 440: 497-500.
5. Berger, A.C., et al. 2007. The subcellular localization of the Niemann-Pick Type C proteins depends on the adaptor complex AP-3. J. Cell Sci. 120: 3640-3652.
6. Kaste, S.C., et al. 2008. Wilms tumour: prognostic factors, staging, therapy and late effects. Pediatr. Radiol. 38: 2-17.

CHROMOSOMAL LOCATION

Genetic locus: EFCAB4A (human) mapping to 11p15.5; Efcab4a (mouse) mapping to 7 F5.

SOURCE

EF-CAB4A (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EF-CAB4A 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-246509 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

EF-CAB4A (A-17) is recommended for detection of EF-CAB4A 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).

EF-CAB4A (A-17) is also recommended for detection of EF-CAB4A in additional species, including equine.

Suitable for use as control antibody for EF-CAB4A siRNA (h): sc-96307, EF-CAB4A siRNA (m): sc-143303, EF-CAB4A shRNA Plasmid (h): sc-96307-SH, EF-CAB4A shRNA Plasmid (m): sc-143303-SH, EF-CAB4A shRNA (h) Lentiviral Particles: sc-96307-V and EF-CAB4A shRNA (m) Lentiviral Particles: sc-143303-V.

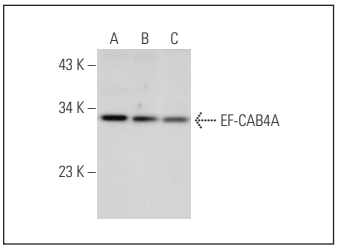
Molecular Weight of EF-CAB4A isoforms 1/2/3: 45/26/33 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or mouse brain extract: sc-2253.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



EF-CAB4A (A-17): sc-246509. Western blot analysis of EF-CAB4A expression in HeLa (**A**) and Jurkat (**B**) whole cell lysates and mouse brain tissue extract (**C**).

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.