

EF-CAB1 (B-2): sc-515554

BACKGROUND

Made up of nearly 146 million bases, chromosome 8 encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and are typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder. Chromosome 8 is also associated with Pfeiffer syndrome, congenital hypothyroidism and Waardenburg syndrome. The gene encoding EF-CAB1 (EF-hand calcium-binding domain-containing peptide protein 1) is located on the long arm of chromosome 8. This 211 amino acid protein contains three EF-hand domains, which are helix-loop-helix structures that are usually found in calcium binding proteins. Other well-studied calcium binding proteins that contain EF-hand motifs include calmodulin (CaM), Troponin C, myosin regulatory light chain (MYL) and S-100 proteins.

REFERENCES

1. Heutink, P., et al. 1995. The genetic background of craniosynostosis syndromes. *Eur. J. Hum. Genet.* 3: 312-323.
2. Beyer, V., et al. 2005. Polysomy 8 defines a clinico-cytogenetic entity representing a subset of myeloid hematologic malignancies associated with a poor prognosis: report on a cohort of 12 patients and review of 105 published cases. *Cancer Genet. Cytogenet.* 160: 97-119.
3. Morgan, R.O., et al. 2006. Deciphering function and mechanism of calcium-binding proteins from their evolutionary imprints. *Biochim. Biophys. Acta* 1763: 1238-1249.
4. Lakowski, T.M., et al. 2007. Peptide binding by a fragment of calmodulin composed of EF-hands 2 and 3. *Biochemistry* 46: 8525-8536.

CHROMOSOMAL LOCATION

Genetic locus: EFCAB1 (human) mapping to 8q11.21; Efcab1 (mouse) mapping to 16 A1.

SOURCE

EF-CAB1 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 187-210 at the C-terminus of EF-CAB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EF-CAB1 (B-2) is available conjugated to agarose (sc-515554 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515554 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515554 PE), fluorescein (sc-515554 FITC), Alexa Fluor® 488 (sc-515554 AF488), Alexa Fluor® 546 (sc-515554 AF546), Alexa Fluor® 594 (sc-515554 AF594) or Alexa Fluor® 647 (sc-515554 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515554 AF680) or Alexa Fluor® 790 (sc-515554 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515554 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

EF-CAB1 (B-2) is recommended for detection of EF-CAB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for EF-CAB1 siRNA (h): sc-77819, EF-CAB1 siRNA (m): sc-143300, EF-CAB1 shRNA Plasmid (h): sc-77819-SH, EF-CAB1 shRNA Plasmid (m): sc-143300-SH, EF-CAB1 shRNA (h) Lentiviral Particles: sc-77819-V and EF-CAB1 shRNA (m) Lentiviral Particles: sc-143300-V.

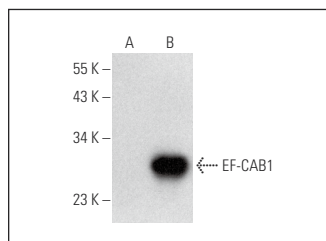
Molecular Weight of EF-CAB1: 24 kDa.

Positive Controls: EF-CAB1 (h) 293T Lysate: sc-114069.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EF-CAB1 (B-2): sc-515554. Western blot analysis of EF-CAB1 expression in non-transfected: sc-117752 (A) and human EF-CAB1 transfected: sc-114069 (B) 293T whole cell lysates.

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.

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