

EF-CAB5 (D-15): sc-246513

BACKGROUND

EF-CAB5 (EF-hand calcium-binding domain-containing protein 5) is a 1,503 amino acid protein containing one EF-hand domain. Existing as four alternatively spliced isoforms, the gene encoding EF-CAB5 maps to human chromosome 17q11.2. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17.

REFERENCES

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
- Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
- Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. *J. Inher. Metab. Dis.* 30: 612.
- Murakami, N., et al. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. *Pediatr. Neurol.* 38: 50-52.
- Koppen, A., et al. 2009. Nuclear receptor-coregulator interaction profiling identifies TRIP3 as a novel peroxisome proliferator-activated receptor gamma cofactor. *Mol. Cell. Proteomics* 8: 2212-2226.
- Zhang, J.B., et al. 2009. Relationship between expression of GYPC and TRIP3 genes and prognosis of acute lymphoblastic leukemia in children. *Zhongguo Dang Dai Er Ke Za Zhi* 11: 29-32.
- D'Hauwe, R., et al. 2011. Birt-Hogg-Dubé (BHD) syndrome. *JBR-BTR* 94: 32-34.

CHROMOSOMAL LOCATION

Genetic locus: EFCAB5 (human) mapping to 17q11.2; Efcab5 (mouse) mapping to 11 B5.

SOURCE

EF-CAB5 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EF-CAB5 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-246513 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EF-CAB5 (D-15) is recommended for detection of EF-CAB5 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 other EF-CAB family members.

Suitable for use as control antibody for EF-CAB5 siRNA (h): sc-93944, EF-CAB5 siRNA (m): sc-143305, EF-CAB5 shRNA Plasmid (h): sc-93944-SH, EF-CAB5 shRNA Plasmid (m): sc-143305-SH, EF-CAB5 shRNA (h) Lentiviral Particles: sc-93944-V and EF-CAB5 shRNA (m) Lentiviral Particles: sc-143305-V.

Molecular Weight of EF-CAB5 isoforms 1/2/3/4: 173/107/159/113 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.