SANTA CRUZ BIOTECHNOLOGY, INC.

ACBD4 (G-8): sc-514694

BACKGROUND

The acyl-CoA-binding domain-containing protein 4 (ACBD4) is a 268 amino acid protein that contains one ACB (acyl-CoA-binding) domain. It exists as three isoforms, which are produced as a result of alternative splicing events. The gene encoding ACBD4 maps to human chromosome 17, which 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, though 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.

REFERENCES

1. Welsch, M.J., et al. 2005. Birt-Hogg-Dube Syndrome. Int. J. Dermatol. 44: 668-673.
2. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. Breast Dis. 27: 21-50.
3. 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. Inherit. Metab. Dis. 30: 612.
4. Dann, R.B., et al. 2007. Strategies for ovarian cancer prevention. Obstet. Gynecol. Clin. North Am. 34: 667-686.

CHROMOSOMAL LOCATION

Genetic locus: ACBD4 (human) mapping to 17q21.31; Acbd4 (mouse) mapping to 11 E1.

SOURCE

ACBD4 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 126-152 within an internal region of ACBD4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACBD4 (G-8) is available conjugated to agarose (sc-514694 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514694 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514694 PE), fluorescein (sc-514694 FITC), Alexa Fluor® 488 (sc-514694 AF488), Alexa Fluor® 546 (sc-514694 AF546), Alexa Fluor® 594 (sc-514694 AF594) or Alexa Fluor® 647 (sc-514694 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514694 AF680) or Alexa Fluor® 790 (sc-514694 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514694 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ACBD4 (G-8) is recommended for detection of ACBD4 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 ACBD4 siRNA (h): sc-93993, ACBD4 siRNA (m): sc-140796, ACBD4 shRNA Plasmid (h): sc-93993-SH, ACBD4 shRNA Plasmid (m): sc-140796-SH, ACBD4 shRNA (h) Lentiviral Particles: sc-93993-V and ACBD4 shRNA (m) Lentiviral Particles: sc-140796-V.

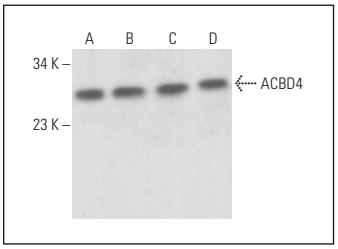
Molecular Weight of ACBD4 isoforms 1/2/3: 30/35/38 kDa.

Positive Controls: ACBD4 (h): 293T Lysate: sc-115756, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

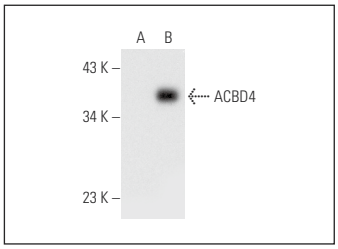
RECOMMENDED SUPPORT REAGENTS

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



ACBD4 (G-8): sc-514694. Western blot analysis of ACBD4 expression in HeLa (**A**), Jurkat (**B**), K-562 (**C**) and NIH/3T3 (**D**) whole cell lysates.



ACBD4 (G-8): sc-514694. Western blot analysis of ACBD4 expression in non-transfected: sc-117752 (**A**) and human ACBD4 transfected: sc-115756 (**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.