SANTA CRUZ BIOTECHNOLOGY, INC.

BCDIN3D (F-5): sc-390348

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BCDIN3D is a 292 amino acid protein that belongs to the methyltransferase superfamily. Containing one BIN3 domain, BCDIN3D may be associated with obesity and BMI. A probable methyltransferase, BCDIN3D is encoded by a gene located on human chromosome 12, which 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. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is caused by a mutant form of PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction.

REFERENCES

1. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
2. Walley, A.J., et al. 2009. The genetic contribution to non-syndromic human obesity. Nat. Rev. Genet. 10: 431-442.
3. Guardiola, M.T., et al. 2010. Pericentric inversion (12)(p12q13-14) as the sole chromosomal abnormality in a leiomyoma of the vulva. Cancer Genet. Cytogenet. 199: 21-23.
4. Aytekin, T., et al. 2010. Deletion mapping of chromosome region 12q13-24 in colorectal cancer. Cancer Genet. Cytogenet. 201: 32-38.

CHROMOSOMAL LOCATION

Genetic locus: BCDIN3D (human) mapping to 12q13.12; Bcdin3d (mouse) mapping to 15 F1.

SOURCE

BCDIN3D (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-48 near the N-terminus of BCDIN3D of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BCDIN3D (F-5) is available conjugated to agarose (sc-390348 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390348 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390348 PE), fluorescein (sc-390348 FITC), Alexa Fluor® 488 (sc-390348 AF488), Alexa Fluor® 546 (sc-390348 AF546), Alexa Fluor® 594 (sc-390348 AF594) or Alexa Fluor® 647 (sc-390348 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390348 AF680) or Alexa Fluor® 790 (sc-390348 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390348 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

BCDIN3D (F-5) is recommended for detection of BCDIN3D 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

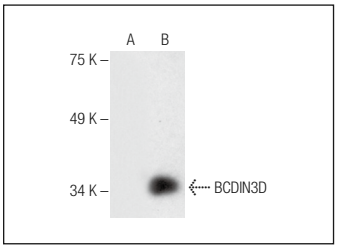
BCDIN3D (F-5) is also recommended for detection of BCDIN3D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BCDIN3D siRNA (h): sc-95998, BCDIN3D siRNA (m): sc-141666, BCDIN3D shRNA Plasmid (h): sc-95998-SH, BCDIN3D shRNA Plasmid (m): sc-141666-SH, BCDIN3D shRNA (h) Lentiviral Particles: sc-95998-V and BCDIN3D shRNA (m) Lentiviral Particles: sc-141666-V.

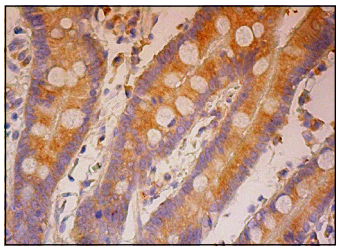
Molecular Weight of BCDIN3D: 33 kDa.

Positive Controls: BCDIN3D (h): 293T Lysate: sc-116532.

DATA



BCDIN3D (F-5): sc-390348. Western blot analysis of BCDIN3D expression in non-transfected: sc-117752 (**A**) and human BCDIN3D transfected: sc-116532 (**B**) 293T whole cell lysates.



BCDIN3D (F-5): sc-390348. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yao, L., et al. 2016. Elevated expression of RNA methyltransferase BCDIN3D predicts poor prognosis in breast cancer. Oncotarget 7: 53895-53902.

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 for detailed protocols and support products.