SANTA CRUZ BIOTECHNOLOGY, INC.

CHIC1/2 (B-11): sc-515175

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CHIC2 (cysteine-rich hydrophobic domain 2 protein), also known as BTL (BrX-like translocated in leukemia) and BTL/ETV6 fusion gene, is a 165 amino acid membrane protein whose gene is affected in a chromosomal translocation t(4;12)(q11;p13) occurring in acute myeloid leukemias (AML). CHIC2 is associated with the plasma membrane and vesicular structures, suggesting that it plays a role in regulating exocytosis. The cysteine-rich hydrophobic motif of CHIC2 contains cysteines that are palmitoylated, which is required for membrane association. In AML, the CHIC2 gene recombines with the TEL gene, resulting in a fusion protein containing the complete helix-loop-helix (HLH) and ETS DNA binding domains of TEL, but is transcribed via the CHIC2 promoter. Frequently, in systemic mast cell disease with associated eosinophilia, the gene encoding CHIC2 is deleted and a FIP1L1-PDGFR-α rearrangement is observed, a gene fusion which results in a constitutively active PDGFR-α.

REFERENCES

1. Cools, J., et al. 1999. Fusion of a novel gene, BTL, to ETV6 in acute myeloid leukemias with a t(4;12)(q11-q12;p13). Blood 94: 1820-1824.
2. Cools, J., et al. 2001. A new family of small, palmitoylated, membrane-associated proteins, characterized by the presence of a cysteine-rich hydrophobic motif. FEBS Lett. 492: 204-209.
3. Pardanani, A., et al. 2003. CHIC2 deletion, a surrogate for FIP1L1-PDGFRA fusion, occurs in systemic mastocytosis associated with eosinophilia and predicts response to imatinib mesylate therapy. Blood 102: 3093-3096.
4. Kuchenbauer, F., et al. 2005. A rare case of acute myeloid leukemia with a CHIC2-ETV6 fusiongen and multiple other molecular aberrations. Leukemia 19: 2366-2368.

CHROMOSOMAL LOCATION

Genetic locus: CHIC1 (human) mapping to Xq13.2, CHIC2 (human) mapping to 4q12; Chic1 (mouse) mapping to X D, Chic2 (mouse) mapping to 5 C3.3.

SOURCE

CHIC1/2 (B-11) is a mouse monoclonal antibody raised against amino acids 1-165 representing full length CHIC2 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.

CHIC1/2 (B-11) is available conjugated to agarose (sc-515175 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515175 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515175 PE), fluorescein (sc-515175 FITC), Alexa Fluor® 488 (sc-515175 AF488), Alexa Fluor® 546 (sc-515175 AF546), Alexa Fluor® 594 (sc-515175 AF594) or Alexa Fluor® 647 (sc-515175 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515175 AF680) or Alexa Fluor® 790 (sc-515175 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CHIC1/2 (B-11) is recommended for detection of CHIC1 and CHIC2 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).

Molecular Weight of CHIC1: 26 kDa.

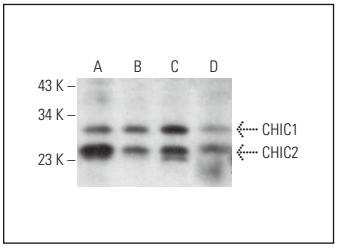
Molecular Weight of CHIC2: 19 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, Jurkat whole cell lysate: sc-2204 or Raji whole cell lysate: sc-364236.

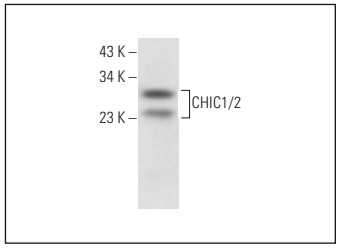
RECOMMENDED SUPPORT REAGENTS

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



CHIC1/2 (B-11): sc-515175. Western blot analysis of CHIC1/2 expression in AML-193 (**A**), Jurkat (**B**) and Raji (**C**) whole cell lysates and human brain tissue extract (**D**).



CHIC1/2 (B-11): sc-515175. Western blot analysis of CHIC1/2 expression in NIH/3T3 whole cell lysate.

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.