SANTA CRUZ BIOTECHNOLOGY, INC.

CHIC2 (Z-22): sc-133457

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: 204-209.5
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.
5. Holtkamp, N., et al. 2007. Characterization of the amplicon on chromosomal segment 4q12 in glioblastoma multiforme. Neurooncology 9: 291-297.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 604332. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: CHIC2 (human) mapping to 4q12; Chic2 (mouse) mapping to 5 C3.3.

SOURCE

CHIC2 (Z-22) is an affinity purified rabbit polyclonal antibody raised against synthetic CHIC2 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

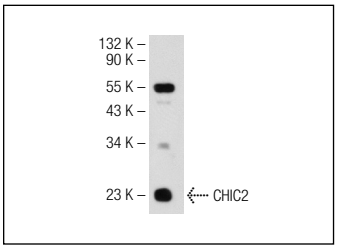
CHIC2 (Z-22) is recommended for detection of CHIC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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).

Suitable for use as control antibody for CHIC2 siRNA (h): sc-89046, CHIC2 siRNA (m): sc-105202, CHIC2 shRNA Plasmid (h): sc-89046-SH, CHIC2 shRNA Plasmid (m): sc-105202-SH, CHIC2 shRNA (h) Lentiviral Particles: sc-89046-V and CHIC2 shRNA (m) Lentiviral Particles: sc-105202-V.

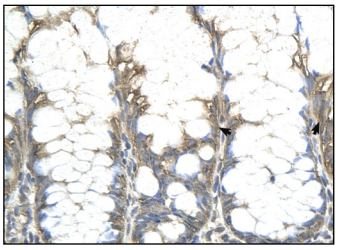
Molecular Weight of CHIC2: 19 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182 or Hep G2 cell lysate: sc-2227.

DATA



CHIC2 (Z-22): sc-133457. Western blot analysis of CHIC2 expression in AML-193 whole cell lysate.



CHIC2 (Z-22): sc-133457. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human intestine tissue showing cytoplasmic localization.

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.