SANTA CRUZ BIOTECHNOLOGY, INC.

RUNX3 (Z-21): sc-133981

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mammalian Runt-related transcription factor (RUNX) family comprises three members, RUNX1 (also designated AML-1, PEBP2αB, CBFA2), RUNX2 (also designated AML-3, PEBP2αA, CBFA1, Osf2) and RUNX3 (also designated AML-2, PEBPαC, CBFA3), and belongs to the acute myeloid leukemia (AML) family. RUNX family members are DNA-binding proteins that regulate the expression of genes involved in cellular differentiation and cell cycle progression. RUNX3 is expressed in cells of hematopoietic origin, including myeloid and B cell lines and spleen. By playing a role in controlling the growth and differentiation of gastric epithelial cells, RUNX3 is a strong candidate as a gastric cancer tumor suppressor. Specifically, hypermethylation inactivates the gene encoding RUNX3. The detection of hypermethylation at multiple regions within the RUNX3 CpG island may aid in the diagnosis and risk assessment of gastric cancer.

REFERENCES

1. Bae, S.C., et al. 1995. Cloning, mapping and expression of PEBP2αC, a third gene encoding the mammalian Runt domain. Gene 159: 245-248.
2. Speck, N.A. and Terryl, S. 1995. A new transcription factor family associated with human leukemias. Crit. Rev. Eukaryot. Gene Expr. 5: 337-364.
3. Meyers, S., et al. 1996. AML-2 is a potential target for transcriptional regulation by the t(8;21) and t(12;21) fusion proteins in acute leukemia. Oncogene 13: 303-312.
4. Zent, C., et al. 1997. Rearrangements of the AML1/CBFA2 gene in myeloid leukemia with the 3;21 translocation: *in vitro* and *in vivo* studies. Leukemia 11: 273-278.
5. Le, X.F., et al. 1999. Regulation of AML2/CBFA3 in hematopoietic cells through the retinoic acid receptor α-dependent signaling pathway. J. Biol. Chem. 274: 21651-21658.
6. Ito, Y. 2004. Oncogenic potential of the RUNX gene family: "overview". Oncogene 23: 4198-4208.

CHROMOSOMAL LOCATION

Genetic locus: Runx3 (mouse) mapping to 4 D3.

SOURCE

RUNX3 (Z-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic RUNX3 peptide of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

RUNX3 (Z-21) is recommended for detection of RUNX3 of mouse 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RUNX3 siRNA (m): sc-37680, RUNX3 shRNA Plasmid (m): sc-37680-SH and RUNX3 shRNA (m) Lentiviral Particles: sc-37680-V.

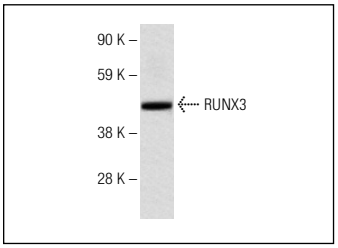
Molecular Weight of RUNX3 full length isoforms: 48/46 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or RAW 264.7 whole cell lysate: sc-2211.

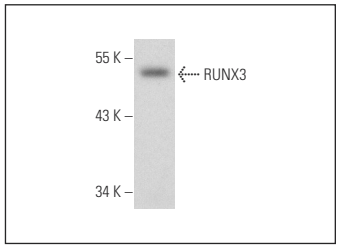
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



RUNX3 (Z-21): sc-133981. Western blot analysis of RUNX3 expression in NIH/3T3 whole cell lysate.



RUNX3 (Z-21): sc-133981. Western blot analysis of RUNX3 expression in RAW 264.7 whole cell lysate.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.