SANTA CRUZ BIOTECHNOLOGY, INC.

RUNX3 (B-9): sc-376543

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.

CHROMOSOMAL LOCATION

Genetic locus: RUNX3 (human) mapping to 1p36.11; Runx3 (mouse) mapping to 4 D3.

SOURCE

RUNX3 (B-9) is a mouse monoclonal antibody raised against amino acids 191-240 mapping within an internal region of RUNX3 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376543 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

RUNX3 (B-9) is recommended for detection of RUNX3 isoforms 1 and 2 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 RUNX3 siRNA (h): sc-37679, RUNX3 siRNA (m): sc-37680, RUNX3 shRNA Plasmid (h): sc-37679-SH, RUNX3 shRNA Plasmid (m): sc-37680-SH, RUNX3 shRNA (h) Lentiviral Particles: sc-37679-V and RUNX3 shRNA (m) Lentiviral Particles: sc-37680-V.

RUNX3 (B-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

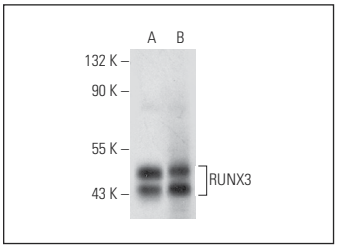
Molecular Weight of RUNX3 full length isoforms: 48/46 kDa.

Positive Controls: U266 whole cell lysate: sc-364800, SW480 cell lysate: sc-2219 or MEG-01 nuclear extract: sc-2150.

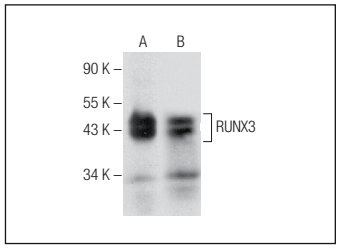
RECOMMENDED SUPPORT REAGENTS

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



RUNX3 (B-9): sc-376543. Western blot analysis of RUNX3 expression in SW480 (**A**) and HL-60 (**B**) whole cell lysates.



RUNX3 (B-9): sc-376543. Western blot analysis of RUNX3 expression in U266 whole cell lysate (**A**) and MEG-01 nuclear extract (**B**).

SELECT PRODUCT CITATIONS

1. Li, Z., et al. 2018. The roles of RUNX3 in cervical cancer cells *in vitro*. Oncol. Lett. 15: 8729-8734.
2. Akhtar, N., et al. 2020. Runx proteins mediate protective immunity against *Leishmania donovani* infection by promoting CD40 expression on dendritic cells. PLoS Pathog. 16: e1009136.

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.

CONJUGATES

See **RUNX3 (R3-5G4): sc-101553** for RUNX3 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.