

RUNX3 (H-50): sc-30197

BACKGROUND

The mammalian runt-related transcription factor (RUNX) family comprises three members, RUNX1 (also designated AML-1, PEBP2 α B, CBFA2), RUNX2 (also designated AML-3, PEBP2 α A, CBFA1, Osf2) and RUNX3 (also designated AML-2, PEBP α C, 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 (H-50) is a rabbit polyclonal antibody raised against amino acids 191-240 mapping within an internal region of RUNX3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-30197 X, 200 μ g/0.1 ml.

APPLICATIONS

RUNX3 (H-50) is recommended for detection of RUNX3 (runt-related transcription factor 3) isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

RUNX3 (H-50) is also recommended for detection of RUNX3 (runt-related transcription factor 3) isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

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 (H-50) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or MEG-01 nuclear extract: sc-2150.

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Klunker, S., et al. 2009. Transcription factors RUNX1 and RUNX3 in the induction and suppressive function of Foxp3⁺ inducible regulatory T cells. *J. Exp. Med.* 206: 2701-2715.
2. Kim, J.H., et al. 2009. Jab1/Csn5 induces the cytoplasmic localization and degradation of RUNX3. *J. Cell. Biochem.* 107: 557-565.
3. Matsuda, M., et al. 2011. Involvement of Runx3 in the basal transcriptional activation of the mouse angiotensin II type 1 receptor-associated protein gene. *Physiol. Genomics* 43: 884-894.
4. Xu, Y., et al. 2012. Loss of heterozygosity at chromosomes 1p35-pter, 4q, and 18q and protein expression differences between adenocarcinomas of the distal stomach and gastric cardia. *Hum. Pathol.* 43: 2308-2317.
5. Wang, S., et al. 2014. Effects of 5-azacytidine on RUNX3 gene expression and the biological behavior of esophageal carcinoma cells. *Mol. Med. Rep.* 9: 1259-1265.

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 or our catalog for detailed protocols and support products.



Try **RUNX3 (R3-5G4): sc-101553** or **RUNX3 (A-3): sc-376591**, our highly recommended monoclonal alternatives to RUNX3 (H-50). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **RUNX3 (R3-5G4): sc-101553**.