

RUNX1 (H-65): sc-28679

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). RUNX family members are DNA-binding proteins that regulate the expression of genes involved in cellular differentiation and cell cycle progression. RUNX1 is involved in hematopoiesis and is frequently targeted in human leukemia by chromosomal translocations that fuse the DNA-binding domain of RUNX1 to other transcription factors and corepressor molecules. In addition to its role in leukemogenesis, RUNX1 is also involved in sensory neuron diversification. Specifically, RUNX1 promotes axonal growth, is selectively expressed in neural crest-derived TrkA+ sensory neurons and mediates TrkA transactivation in migratory neural crest cells. Alternative splicing gives rise to several isoforms of RUNX1.

CHROMOSOMAL LOCATION

Genetic locus: RUNX1 (human) mapping to 21q22.12; Runx1 (mouse) mapping to 16 C4.

SOURCE

RUNX1 (H-65) is a rabbit polyclonal antibody raised against amino acids 186-250 mapping within an internal region of RUNX1 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-28679 X, 200 μ g/0.1 ml.

APPLICATIONS

RUNX1 (H-65) is recommended for detection of a broad range of RUNX1 (Runt-related transcription factor 1) isoforms 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).

RUNX1 (H-65) is also recommended for detection of a broad range of RUNX1 (Runt-related transcription factor 1) isoforms in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RUNX1 siRNA (h): sc-37677, RUNX1 siRNA (m): sc-37678, RUNX1 shRNA Plasmid (h): sc-37677-SH, RUNX1 shRNA Plasmid (m): sc-37678-SH, RUNX1 shRNA (h) Lentiviral Particles: sc-37677-V and RUNX1 shRNA (m) Lentiviral Particles: sc-37678-V.

RUNX1 (H-65) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RUNX1: 20-52 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, U-937 nuclear extract: sc-2156 or HL-60 nuclear extract: sc-2147.

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

- Senyuk, V., et al. 2007. Repression of RUNX1 activity by EVI1: a new role of EVI1 in leukemogenesis. *Cancer Res.* 67: 5658-5666.
- Gilles, L., et al. 2008. P19INK4D links endomitotic arrest and megakaryocyte maturation and is regulated by AML-1. *Blood* 111: 4081-4091.
- Galli, C., et al. 2009. Commitment to the osteoblast lineage is not required for RANKL gene expression. *J. Biol. Chem.* 99: 284: 12654-12662.
- 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.
- Churpek, J.E., et al. 2010. Identification and molecular characterization of a novel 3' mutation in RUNX1 in a family with familial platelet disorder. *Leuk. Lymphoma* 51: 1931-1935.
- Tsuruyama, T., et al. 2011. Murine leukemia retrovirus integration induces the formation of transcription factor complexes on palindromic sequences in the signal transducer and activator of transcription factor 5a gene during the development of pre-B lymphomagenesis. *Am. J. Pathol.* 178: 1374-1386.

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 **RUNX1 (A-2): sc-365644** or **RUNX1 (DW71): sc-101146**, our highly recommended monoclonal alternatives to RUNX1 (H-65). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **RUNX1 (A-2): sc-365644**.