SANTA CRUZ BIOTECHNOLOGY, INC.

RUNX1 (A-2): sc-365644

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). 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 Trk A+ sensory neurons and mediates Trk A transactivation in migratory neural crest cells. Alternative splicing gives rise to several isoforms of RUNX1.

REFERENCES

1. Daga, A., et al. 1992. Leukemia/*Drosophila* homology. Nature 356: 448.
2. Golub, T.R., et al. 1995. Fusion of the TEL gene on 12p13 to the AML1 gene on 21q22 in acute lymphoblastic leukemia. Proc. Natl. Acad. Sci. USA 92: 4917-4921.
3. Miyoshi, H., et al. 1995. Alternative splicing and genomic structure of the AML1 gene involved in acute myeloid leukemia. Nucleic Acids Res. 23: 2762-2769.

CHROMOSOMAL LOCATION

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

SOURCE

RUNX1 (A-2) is a mouse monoclonal antibody raised against amino acids 186-250 mapping within an internal region of RUNX1 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-365644 X, 200 µg/0.1 ml.

RUNX1 (A-2) is available conjugated to agarose (sc-365644 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365644 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365644 PE), fluorescein (sc-365644 FITC), Alexa Fluor® 488 (sc-365644 AF488), Alexa Fluor® 546 (sc-365644 AF546), Alexa Fluor® 594 (sc-365644 AF594) or Alexa Fluor® 647 (sc-365644 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365644 AF680) or Alexa Fluor® 790 (sc-365644 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

RUNX1 (A-2) is recommended for detection of a broad range of RUNX1 isoforms 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), 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).

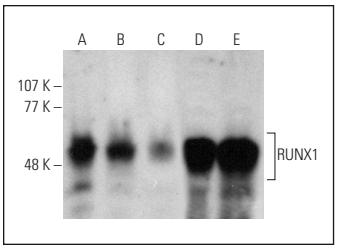
Suitable for use as control antibody for RUNX1 siRNA (h): sc-37677, RUNX1 siRNA (m): sc-37678, RUNX1 shRNA Plasmid (h): sc-37677-SH, RUNX1 shRNA Plasmid (m): sc-37678-SH, RUNX1 shRNA (h) Lentiviral Particles: sc-37677-V and RUNX1 shRNA (m) Lentiviral Particles: sc-37678-V.

RUNX1 (A-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

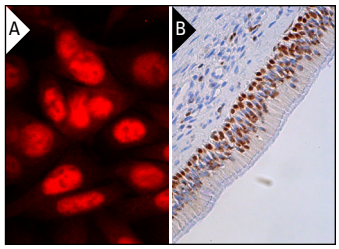
Molecular Weight of RUNX1: 20-52 kDa.

Positive Controls: HL-60 nuclear extract: sc-2147, A-10 cell lysate: sc-3806 or Hep G2 cell lysate: sc-2227.

DATA



RUNX1 (A-2) HRP: sc-365644 HRP. Direct western blot analysis of RUNX1 expression in NRK (**A**), A-10 (**B**) and Hep G2 (**C**) whole cell lysates and U-937 (**D**) and HL-60 (**E**) nuclear extracts.



RUNX1 (A-2) Alexa Fluor® 594: sc-365644 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). RUNX1 (A-2): sc-365644. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear staining of respiratory epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Vivacqua, A., et al. 2015. Estrogenic gper signaling regulates mir144 expression in cancer cells and cancer-associated fibroblasts. Oncotarget 6: 16573-16587.
2. Freitas, D., et al. 2019. O-glycans truncation modulates gastric cancer cell signaling and transcription leading to a more aggressive phenotype. EBioMedicine 40: 349-362.
3. Chen, J., et al. 2020. RNA-binding protein HuR promotes Th17 cell differentiation and can be targeted to reduce autoimmune neuroinflammation. J. Immunol. 204: 2076-2087.

RESEARCH USE

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