**RUNX2 (C-12): sc-390715**

**BACKGROUND**

The mammalian Runt-related transcription factor (RUNX) family comprises three members, RUNX1 (also designated AML-1, PEBP2αA, CBFA2), RUNX2 (also designated AML-3, PEBP2αxA, CBFA1, Osf2) and RUNX3 (also designated AML-2, PEBPαxC, CBFA3). RUNX family members are DNA-binding proteins that regulate the expression of genes involved in cellular differentiation and cell cycle progression. RUNX2 is essential for skeletal mineralization in that it stimulates osteoblast differentiation of mesenchymal stem cells, promotes chondrocyte hypertrophy and contributes to endothelial cell migration and vascular invasion of developing bones. Regulating RUNX2 expression may be a useful therapeutic tool for promoting bone formation. Mutations in the C-terminus of RUNX2 are associated with cleidocranial dysplasia syndrome, an autosomal-dominant skeletal dysplasia syndrome that is characterized by widely patent calvarial sutures, clavicular hypoplasia, supernumerary teeth, and short stature.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: RUNX2 (human) mapping to 6p21.1; Runx2 (mouse) mapping to 17 B3.

**SOURCE**

RUNX2 (C-12) is a mouse monoclonal antibody raised against amino acids 294-363 of RUNX2 of mouse origin.

**PRODUCT**

Each vial contains 200 µg IgG1 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-390715 X, 200 µg/0.1 ml.

RUNX2 (C-12) is available conjugated to agarose (sc-390715 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390715 HRP), 200 µg/ml, for WB, IHC/IP and ELISA; to either phycocerythrin (sc-390715 PE), fluorescein (sc-390715 FITC), Alexa Fluor® 488 (sc-390715 AF488), Alexa Fluor® 546 (sc-390715 AF546), Alexa Fluor® 594 (sc-390715 AF594) or Alexa Fluor® 647 (sc-390715 AF647), 200 µg/ml, for WB (RGB), IF, IHC/IP and FCM; and to either Alexa Fluor® 680 (sc-390715 AF680) or Alexa Fluor® 790 (sc-390715 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**STORAGE**

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

**APPLICATIONS**

RUNX2 (C-12) is recommended for detection of RUNX2 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).

RUNX2 (C-12) is also recommended for detection of RUNX2 in additional species, including equine, bovine, porcine and canine.


**REFERENCES**


**DATA**

![RUNX2 (C-12): sc-390715. Western blot analysis of RUNX2 expression in MG-63 (A), MCF-7 (B), MDCK (C), K-562 (D) and PC-3 (E) whole cell lysates.](image1)

![RUNX2 (C-12): sc-390715. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of subset of cells in non-germinal center.](image2)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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