bs-5685R **[Primary Antibody]**

phospho-RUNX2 (Ser451) Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 860 **SWISS:** Q13950

Target: RUNX2 (Ser451)

Immunogen: KLH conjugated Synthesised phosphopeptide derived from human RUNX2 around the phosphorylation site of Ser451: TS(p-S)GS.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: This gene is a member of the RUNX family of transcription factors and encodes a nuclear protein with an Runt DNA-binding domain. This protein is essential for osteoblastic differentiation and skeletal morphogenesis and acts as a scaffold for nucleic acids and regulatory factors involved in skeletal gene expression. The protein can bind DNA both as a monomer or, with more affinity, as a subunit of a heterodimeric complex. Mutations in this gene have been associated with the bone development disorder cleidocranial dysplasia (CCD). Transcript variants that encode different protein isoforms result from the use of alternate promoters as well as alternate splicing. [provided by RefSeq, Jul 2008].

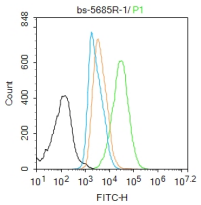
Applications: **Flow-Cyt** (1ug/Test)

Reactivity: Human (predicted: Pig, Cow, Chicken, Dog, Horse)

Predicted MW.: 67 kDa

Subcellular Location: Nucleus

VALIDATION IMAGES



Blank control:HL-60. Primary Antibody (green line): Rabbit Anti-phospho-RUNX2 (Ser451) antibody (bs-5685R) Dilution: 1µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-AF488 Dilution: 1µg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20°C. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=9.078]** Tzu-Hsiang Lin. et al. A bilineage thermosensitive hydrogel system for stimulation of mesenchymal stem cell differentiation and enhancement of osteochondral regeneration. Compos Part B-Eng. 2022 Jan;:109614 ICC ;Rabbit.

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10.1016/j.compositesb.2022.109614

- **[IF=5.168]** Kim et al. Characterization of CADD522, a small molecule that inhibits RUNX2-DNA binding and exhibits antitumor activity. (2017) Oncotarget. 8:70916-70940 WB ;Human. 29050333
- **[IF=4.165]** Yu-Ting Yen. et al. PP2A in LepR+ mesenchymal stem cells contributes to embryonic and postnatal endochondral ossification through Runx2 dephosphorylation. Commun Biol. 2021 Jun;4(1):1-12 WB,IHC ;Mouse. 34079065
- **[IF=3.08]** Wang et al. Human Amnion-Derived Mesenchymal Stem Cells Protect Human Bone Marrow Mesenchymal Stem Cells against Oxidative Stress-Mediated Dysfunction via ERK1/2 MAPK Signaling. (2016) Mol.Cells. 39:186-94 FCM ;Human. 26743906
- **[IF=3.201]** Nagy A et al. Zinc Inhibits HIF-Prolyl Hydroxylase Inhibitor-Aggravated VSMC Calcification Induced by High Phosphate. Front Physiol. 2020 Jan 15;10:1584. WB ;Human. 32009983

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