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#12556**RUNX2 (D1L7F) Rabbit mAb**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, FC-FP, ChIP, ChIP-seq	H M R	Endogenous	55-62	Rabbit IgG	#Q13950	860

**Product Usage Information**

For optimal ChIP and ChIP-seq results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Flow Cytometry (Fixed/Permeabilized)	1:1600 - 1:6400
Chromatin IP	1:100
Chromatin IP-seq	1:100

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #68007.

**Specificity/Sensitivity**

RUNX2 (D1L7F) Rabbit mAb recognizes endogenous levels of total RUNX2 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala273 of human RUNX2 protein.

**Background**

Runt-related transcription factor 2 (RUNX2) is a member of the RUNX family of transcription factors. It is involved in osteoblast differentiation and skeletal morphogenesis. RUNX2 regulates the transcription of various genes, including osteopontin, bone sialoprotein, and osteocalcin, via binding to the core site of the enhancers or promoters (1-3). RUNX2 is crucial for the maturation of osteoblasts and both intramembranous and endochondral ossification. Mutations in the corresponding *RUNX2* gene have been associated with the bone development disorder cleidocranial dysplasia (CCD) (4-6). RUNX2 is also abnormally expressed in various human cancers, including prostate and breast cancer. It plays an important role in migration, invasion, and bone metastasis of prostate and breast cancer cells (7-10).

**Background References**

1. Viereck, V. et al. (2002) *J Cell Biochem* 86, 348-56.
2. Willis, D.M. et al. (2002) *J Biol Chem* 277, 37280-91.
3. Tu, Q. et al. (2008) *J Cell Physiol* 217, 40-7.
4. Quack, I. et al. (1999) *Am J Hum Genet* 65, 1268-78.
5. Cardoso, B.M. et al. (2010) *Clin Dysmorphol* 19, 150-2.
6. Han, M.S. et al. (2010) *J Cell Biochem* 110, 97-103.
7. Akech, J. et al. (2010) *Oncogene* 29, 811-21.
8. van der Deen, M. et al. (2010) *J Cell Biochem* 109, 828-37.
9. Barnes, G.L. et al. (2003) *Cancer Res* 63, 2631-7.
10. Barnes, G.L. et al. (2004) *Cancer Res* 64, 4506-13.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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