

Ring1A (D2P4D) 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

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Applications: W, IP, IF-IC	Reactivity: H R	Sensitivity: Endogenous	MW (kDa): 54	Source/Isotype: Rabbit IgG	UniProt ID: #Q06587	Entrez-Gene Id: 6015
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:100
1:800

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.

Specificity/Sensitivity

Ring1A (D2P4D) Rabbit mAb recognizes endogenous levels of total Ring1A protein. This antibody does not cross-react with Ring1B.

Species predicted to react based on 100% sequence homology

Guinea Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro316 of human Ring1A protein.

Background

Ring1A plays a role in polycomb group (PcG) protein function. PcG proteins are critically involved in transcriptional repression of Hox genes during development (1,2). PcG proteins form two distinct complexes: EED-EZH2 and the PRC complex, which is composed of at least Bmi1 and Ring1A/Ring1B. The EZH2-containing complex is responsible for the methylation of H3K27, and the PRC complex ubiquitylates H2A. EZH2 methylation is required prior to PRC ubiquitylation, and both are essential for Hox gene repression (1). It has recently been shown that PcG proteins silence a group of developmentally important regulator genes, referred to as bivalent genes (3). This regulation may be responsible for the ability of stem cells to self renew or switch to differentiate into multipotent progenitors. Aberrant epigenetic silencing by PcG proteins is also thought to be important in tumorigenesis (4).

Background References

1. Cao, R. et al. (2005) *Mol Cell* 20, 845-54.
2. Otte, A.P. and Kwaks, T.H. (2003) *Curr Opin Genet Dev* 13, 448-54.
3. Stock, J.K. et al. (2007) *Nat Cell Biol* 9, 1428-35.
4. Sparmann, A. and van Lohuizen, M. (2006) *Nat Rev Cancer* 6, 846-56.

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 **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **R:** Rat

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