

Revision 4

Store at -20C

#5694

RING1B (D22F2) XP® Rabbit mAb



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

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
www.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:
WB, IP, IF-IC, FC-FP, ChIP, ChIP-seq, C&R	H M R Mk	Endogenous	41	Rabbit IgG	Q99496	6045

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (Immunocytochemistry)	1:250 - 1:1000
Flow Cytometry (Fixed/Permeabilized)	1:100 - 1:400
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50

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

RING1B (D22F2) XP® Rabbit mAb recognizes endogenous levels of total RING1B protein.

Species Reactivity:

Human, Mouse, Rat, Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the full-length human RING1B protein.

Background

The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell-cycle regulation, and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death, and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, Eed-Ezh2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. This histone methyltransferase activity requires the Ezh2, Eed, and Suz12 subunits of the complex (5). Methylation of Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinates histone H2A on Lys119 (6). PRC1 is composed of Bmi1 and RING1A (also RING1 or RNF1), both of which act to enhance the E3 ubiquitin ligase activity of an additional catalytic subunit RING1B (also RING2 or RNF2) (7). PcG proteins play an important role in the regulation of cell proliferation and senescence through repression of the p16 INK4A and p19 ARF genes and are required for maintenance of adult hematopoietic and neural stem cells, as well as embryonic stem cells (3,4,8-10).

- Boyer, L.A. et al. (2006) *Nature* 441, 349-53.
- Lee, T.I. et al. (2006) *Cell* 125, 301-13.
- Park, I.K. et al. (2003) *Nature* 423, 302-5.
- Molofsky, A.V. et al. (2003) *Nature* 425, 962-7.
- Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57-67.
- Wang, H. et al. (2004) *Nature* 431, 873-8.
- Cao, R. et al. (2005) *Mol Cell* 20, 845-54.
- Molofsky, A.V. et al. (2005) *Genes Dev* 19, 1432-7.
- Jacobs, J.J. et al. (1999) *Nature* 397, 164-8.
- Jacobs, J.J. et al. (1999) *Genes Dev* 13, 2678-90.

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

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 WB: Western Blotting IP: Immunoprecipitation IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized) ChIP: Chromatin IP ChIP-seq: Chromatin IP-seq C&R: CUT&RUN

CROSS-REACTIVITY KEY H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse Rab: rabbit All: all species expected

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

#5694



RING1B (D22F2) XP® Rabbit mAb

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

CSTLT_86_20200512

Orders: 877-616-CELL (2355) • orders@cellsignal.com • Support: 877-678-TECH (8324) • info@cellsignal.com • Web: www.cellsignal.com