

#13594 Store at -20C

JARID2 (D6M9X) Rabbit mAb



Cell Signaling
TECHNOLOGY®

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:
WB, IP, ChIP, ChIP-seq, C&R, C&T	H M	Endogenous	150	Rabbit IgG	#Q92833	3720

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.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50
CUT&Tag	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

JARID2 (D6M9X) Rabbit mAb recognizes endogenous levels of total JARID2 protein.

Species predicted to react based on 100% sequence homology:

Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp1114 of human JARID2 protein.

Background

Jumonji/ARID domain-containing protein 2 (JARID2) is a founding member of the JmjC-domain-containing protein family that is involved in regulation of histone methyltransferase activity (1,2). While many proteins in this family are protein demethylases, JARID2 lacks several conserved residues in the catalytic domain and does not exhibit protein demethylase activity (1,2). Research studies indicate that JARID2 is a nuclear protein that is highly expressed in poorly differentiated and actively dividing cells, with expression decreasing upon cellular differentiation (3,4). Expression of JARID2 protein is essential for embryonic development as the protein plays an important role in regulation of heart and liver development, neural tube fusion, and hematopoiesis (4). JARID2 is an accessory component of the polycomb repressor complex 2 (PRC2), which represses target gene expression through methylation of histone H3 at lysine 27 by EZH2 methyltransferase (5-10). JARID2 recruits the PRC2 complex to target genes and increases EZH2 methyltransferase activity by binding to nucleosomes and DNA (5-10). Additional studies show that loss of JARID2 expression results in decreased recruitment of PRC2, decreased methylation of histone H3 at lysine 27 at target genes, and delayed and incomplete differentiation of embryonic stem cells (5-10). Experimental knockdown of JARID2 in *Xenopus laevis* impairs the induction of gastrulation genes in blastula embryos and results in differentiation failure (5).

Background References

1. Cloos, P.A. et al. (2008) *Genes Dev* 22, 1115-40.
2. Klose, R.J. et al. (2006) *Nat Rev Genet* 7, 715-27.
3. Luzzani, C. et al. (2011) *Biochem Biophys Res Commun* 410, 816-22.
4. Jung, J. et al. (2005) *Dev Dyn* 232, 21-32.
5. Peng, J.C. et al. (2009) *Cell* 139, 1290-302.

6. Shen, X. et al. (2009) *Cell* 139, 1303-14.
7. Pasini, D. et al. (2010) *Nature* 464, 306-10.
8. Li, G. et al. (2010) *Genes Dev* 24, 368-80.
9. Son, J. et al. (2013) *Genes Dev* 27, 2663-77.
10. Kaneko, S. et al. (2014) *Mol Cell* 53, 290-300.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation ChIP: Chromatin IP ChIP-seq: Chromatin IP-seq C&R: CUT&RUN C&T: CUT&Tag
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 GP: Guinea Pig Rab: rabbit All: all species expected
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. SimpleChIP is a registered trademark of Cell Signaling Technology, Inc. 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.
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.