

Store at
-20°C

CXXC1 (D1R5R) Rabbit mAb



#40672

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orders@cellsignal.comEntrez-Gene ID #30827
UniProt ID #Q9P0U4

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For Research Use Only. Not For Use In Diagnostic Procedures.

| Applications W, IP, ChIP Endogenous | Species Cross-Reactivity* | Molecular Wt. 82 kDa | Isotype Rabbit IgG** |
|---|---------------------------|-------------------------|-------------------------|
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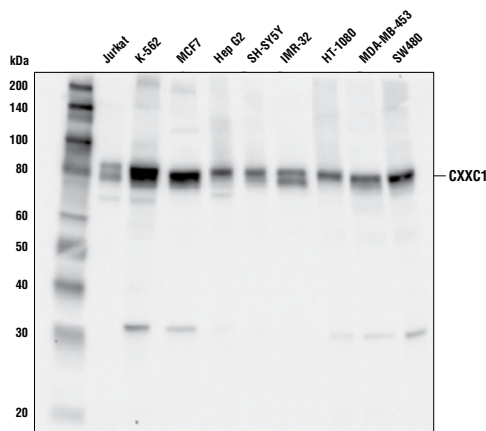
Background: The CXXC finger protein 1 (CXXC1, CGBP, CFP1) is a key subunit of the human SET1 histone methyltransferase complex (1,2) that methylates histone H3 at Lys4 to create a mark of transcriptionally active promoters (3,4). CXXC1 is enriched at CpG islands where it selectively binds non-methylated CpG motifs to provide a link between global H3K4 methylation and CpG islands (5). Research studies have revealed a role for CXXC1 in the maintenance of cytosine methylation through direct interaction with DNMT1 (6-9). The epigenetic functions of CXXC1 are critical for normal embryonic development. Targeted deletion of the murine *Cxxc1* gene results in early embryonic lethality while *Cxxc1*-null embryonic stem (ES) cells exhibit increased apoptosis and fail to undergo differentiation in vitro following withdrawal of leukemia inhibitory factor LIF (6).

Background References:

- (1) Miller, T. et al. (2001) *Proc Natl Acad Sci USA* 98, 12902-7.
- (2) Shilatifard, A. (2008) *Curr Opin Cell Biol* 20, 341-8.
- (3) Tenney, K. and Shilatifard, A. (2005) *J Cell Biochem* 95, 429-36.
- (4) Lee, J.H. and Skalnik, D.G. (2005) *J Biol Chem* 280, 41725-31.
- (5) Lee, J.H. et al. (2007) *J Biol Chem* 282, 13419-28.
- (6) Hughes, C.M. et al. (2004) *Mol Cell* 13, 587-97.
- (7) Butler, J.S. et al. (2008) *DNA Cell Biol* 27, 533-43.
- (8) Tate, C.M. et al. (2009) *Mol Cell Biol* 29, 3817-31.
- (9) Carlone, D.L. et al. (2005) *Mol Cell Biol* 25, 4881-91.
- (10) Young, S.R. et al. (2006) *J Biol Chem* 281, 37034-44.
- (11) Cao, W. et al. (2016) *Nat Commun* 7, 11687.

Specificity/Sensitivity: CXXC1 (D1R5R) Rabbit mAb recognizes endogenous levels of total CXXC1 protein. In Western blot analysis, the antibody detects a 32kDa protein of unknown identity.

Source/Purification: CXXC1 (D1R5R) Rabbit mAb recognizes endogenous levels of total CXXC1 protein.



Western blot analysis of extracts from various cell lines using CXXC1 (D1R5R) Rabbit mAb.

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

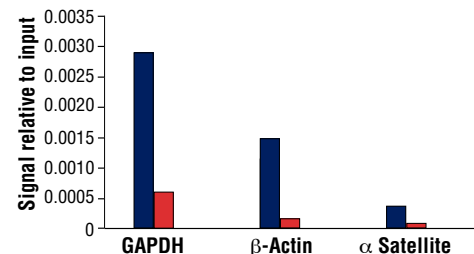
Recommended Antibody Dilutions:

| | |
|---------------------|--------|
| Western blotting | 1:1000 |
| Immunoprecipitation | 1:100 |
| Chromatin IP | 1:100 |

Optimal ChIP conditions: 5 µl of antibody & 10 µg of chromatin (4 x 10⁶ cells) per IP. Antibody validated using SimpleChIP® Enzymatic ChIP Kits.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

■ CXXC1 (D1R5R) Rabbit mAb #40672
■ Normal Rabbit IgG #2729



Chromatin immunoprecipitations were performed with cross-linked chromatin from HeLa cells and either CXXC1 (D1R5R) Rabbit mAb or Normal Rabbit IgG #2729 using SimpleChIP® Plus Enzymatic Chromatin IP Kit (Magnetic Beads) #9005. The enriched DNA was quantified by real-time PCR using SimpleChIP® Human GAPDH Promoter Primers #4471, SimpleChIP® Human β-Actin Promoter Primers #13653, and SimpleChIP® Human α-Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

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

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.