

CXXC1 Antibody

✓ 100 µl
(10 western blots)

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New 11/13

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

Applications W Endogenous	Species Cross-Reactivity* H, Mk	Molecular Wt. 82 kDa	Source Rabbit**
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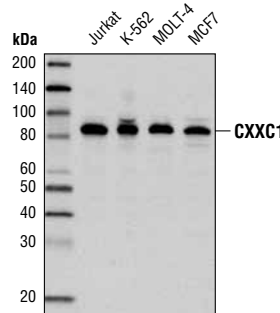
Background: The CXXC finger protein 1 (CXXC1, CGBP, CFP1) is a key subunit of the human SET1 histone methyltransferase complex (1,2) that methylates histone H3 at Lys4 to create a mark of transcriptionally active promoters (3,4). CXXC1 is enriched at CpG islands where it selectively binds non-methylated 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).

Specificity/Sensitivity: CXXC1 Antibody recognizes endogenous levels of total CXXC1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp117 of human CXXC1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Xu, C. et al. (2011) *Nat Commun* 2, 227.
- (2) Lee, J.H. and Skalnik, D.G. (2005) *J Biol Chem* 280, 41725-31.
- (3) Miller, T. et al. (2001) *Proc Natl Acad Sci USA* 98, 12902-7.
- (4) Clouaire, T. et al. (2012) *Genes Dev* 26, 1714-28.
- (5) Thomson, J.P. et al. (2010) *Nature* 464, 1082-6.
- (6) Carlone, D.L. et al. (2005) *Mol Cell Biol* 25, 4881-91.
- (7) Tate, C.M. et al. (2009) *Mol Cell Biol* 29, 3817-31.
- (8) Young, S.R. et al. (2006) *J Biol Chem* 281, 37034-44.
- (9) Butler, J.S. et al. (2008) *DNA Cell Biol* 27, 533-43.



Western blot analysis of extracts from various cell lines using CXXC1 Antibody.

Entrez Gene ID #30827
UniProt ID #Q9POU4

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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 Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: 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.