

#12585 Store at -20C

## CXXC1 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H Mk	Endogenous	82	Rabbit	#Q9P0U4	30827

## Product Usage Information

## Application

Western Blotting

## Dilution

1:1000

## 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.

## 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

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. 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 U S A* 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.

## 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

## 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

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