

CXXC1 Antibody



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

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

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

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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