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Mouse Cbx7 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20840c

Product Information

Application	WB, E
Primary Accession	Q8VDS3
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB50982
Calculated MW	18109

Additional Information

Gene ID	52609
Other Names	Chromobox protein homolog 7, Cbx7, D15Ertd417e
Target/Specificity	This Mouse Cbx7 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 144-178 amino acids from the C-terminal region of human Mouse Cbx7.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Cbx7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Cbx7
Synonyms	D15Ertd417e
Function	Component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development

	(PubMed:16537902, PubMed:22226355). PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility. Promotes histone H3 trimethylation at 'Lys-9' (H3K9me3) (By similarity). Binds to histone H3 trimethylated at 'Lys-9' (H3K9me3) or at 'Lys-27' (H3K27me3) (PubMed:16537902, PubMed:22226355). Trimethylation at 'Lys-27' (H3K27me3) is important for chromatin recruitment (PubMed:16537902, PubMed:22226355). May possibly also bind trimethylated lysine residues in other proteins (in vitro) (PubMed:16537902). Binds non-coding, single-stranded RNA and double-stranded RNA (PubMed:16537902, PubMed:20541999). Plays a role in the timely repression of differentiation-specific genes in pluripotent embryonic stem cells to maintain the undifferentiated state (PubMed:22226355). Regulator of cellular lifespan by maintaining the repression of CDKN2A, but not by inducing telomerase activity (PubMed:14647293).
Cellular Location	Nucleus. Chromosome Note=Requires trimethylation at 'Lys-27' (H3K27me3) for the localization to chromatin (PubMed:22226355). Localizes to facultative heterochromatin and to the inactivated X chromosome in females (PubMed:16537902).
Tissue Location	Expressed in embryonic stem cells.

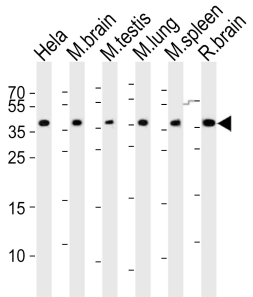
Background

Component of a Polycomb group (PcG) multiprotein PRC1- like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility. Promotes histone H3 trimethylation at 'Lys-9' (H3K9me3). Binds to histone H3 trimethylated 'Lys-9' (H3K9me3) or at 'Lys-27' (H3K27me3). May possibly also bind trimethylated lysine residues in other proteins (in vitro). Binds non-coding, single-stranded RNA. Regulator of cellular lifespan by maintaining the repression of CDKN2A, but not by inducing telomerase activity.

References

Gil J.,et al.Nat. Cell Biol. 6:67-72(2004).
Bernstein E.,et al.Mol. Cell. Biol. 26:2560-2569(2006).
Yap K.L.,et al.Mol. Cell 38:662-674(2010).

Images



Western blot analysis of lysates from Hela cell line, mouse brain, mouse testis, mouse lung, mouse spleen, rat brain tissue (from left to right), using Mouse Cbx7 Antibody (C-term)(Cat. #AP20840c). AP20840c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.