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(Mouse) Dppa3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20950c

Product Information

Application	WB, E
Primary Accession	Q8QZY3
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB51138
Calculated MW	17670

Additional Information

Gene ID	73708
Other Names	Developmental pluripotency-associated protein 3, Compaction-associated protein 1, Primordial germ cell protein 7, Dppa3, Cap1p, Crg1, Pgc7
Target/Specificity	This mouse Dppa3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 134-170 amino acids from the C-terminal region of mouse Dppa3.
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) Dppa3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dppa3
Synonyms	Cap1p, Crg1, Pgc7 {ECO:0000303|PubMed:11
Function	Primordial germ cell (PGCs)-specific protein involved in epigenetic chromatin reprogramming in the zygote following fertilization. In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the

	first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted loci are protected from this process. Participates in protection of DNA methylation in the maternal pronucleus by preventing conversion of 5mC to 5hmC: specifically recognizes and binds histone H3 dimethylated at 'Lys-9' (H3K9me2) on maternal genome, and protects maternal genome from TET3- mediated conversion to 5hmC and subsequent DNA demethylation. Does not bind paternal chromatin, which is mainly packed into protamine and does not contain much H3K9me2 mark. Also protects imprinted loci that are marked with H3K9me2 in mature sperm from DNA demethylation in early embryogenesis. May be important for the totipotent/pluripotent states continuing through preimplantation development. Also involved in chromatin condensation in oocytogenesis.
Cellular Location	Nucleus. Cytoplasm Note=Localized in the cytoplasm at the primary oocyte stage and in oocytes within mono-laminar follicles. Expressed in the nucleus and cytoplasm of oocytes in bi-laminar and Graafian follicles and during the 2-cell and morula stages. In 3.5 dpc blastocysts localization is mainly nuclear. Mainly localizes in the female pronucleus, localization to the male pronucleus in much weaker.
Tissue Location	Expressed in the immature oocytes and in newborn ovaries. Subsequently detected in maturing oocytes and in preimplantation embryos. Expressed in pluripotent embryonic but not in differentiated somatic cells. Expressed in blastocysts, epiblasts, primordial germ cells, embryonic gonads and primitive spermatogonia. No expression is detected in adult testes.

Background

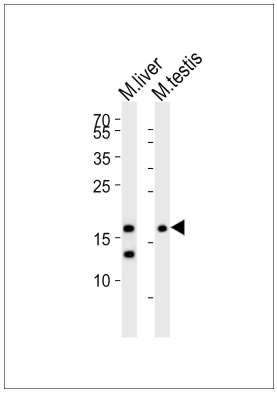
Primordial germ cell (PGCs)-specific protein involved in epigenetic chromatin reprogramming in the zygote following fertilization. In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted loci are protected from this process. Participates in protection of DNA methylation in the maternal pronucleus by preventing conversion of 5mC to 5hmC: specifically recognizes and binds histone H3 dimethylated at 'Lys-9' (H3K9me2) on maternal genome, and protects maternal genome from TET3-mediated conversion to 5hmC and subsequent DNA demethylation. Does not bind paternal chromatin, which is mainly packed into protamine and does not contain much H3K9me2 mark. Also protects imprinted loci that are marked with H3K9me2 in mature sperm from DNA demethylation in early embryogenesis. May be important for the totipotent/pluripotent states continuing through preimplantation development. Also involved in chromatin condensation in oocytogenesis.

References

Saitou M.,et al.Nature 418:293-300(2002).
Sato M.,et al.Mech. Dev. 113:91-94(2002).
Bortvin A.,et al.Development 130:1673-1680(2003).
Li W.,et al.Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
Carninci P.,et al.Science 309:1559-1563(2005).

Images

Western blot analysis of lysates from mouse liver, mouse testis tissue (from left to right), using (Mouse) Dppa3 Antibody (C-term)(Cat. #AP20950c). AP20950c 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'.