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(Mouse) Dppa3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20950c

Specification

(Mouse) Dppa3 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q8OZY3
Reactivity	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**17670**

(Mouse) Dppa3 Antibody (C-term) - 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.

(Mouse) Dppa3 Antibody (C-term) - 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.

(Mouse) Dppa3 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

(Mouse) Dppa3 Antibody (C-term) - Images

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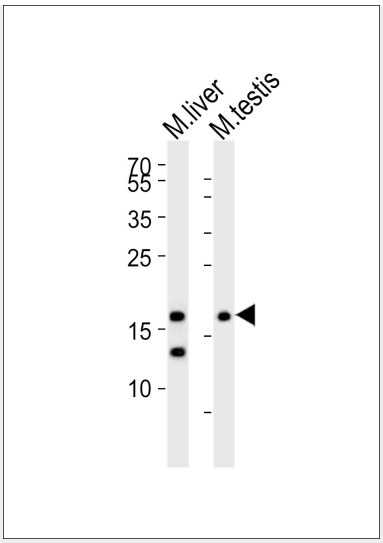

Western blot analysis of lysates from mouse liver, mouse testis tissue (from left to right), using (Mouse) Dppa3 Antibody (C-term)(Cat. #AP20950c). AP20950c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

(Mouse) Dppa3 Antibody (C-term) - 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.

(Mouse) Dppa3 Antibody (C-term) - 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).