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DPPA3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21453b

Product Information

Application	WB, E
Primary Accession	Q6W0C5
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB50716
Calculated MW	17851

Additional Information

Gene ID	359787
Other Names	Developmental pluripotency-associated protein 3, Stella-related protein, DPPA3, STELLAR
Target/Specificity	This DPPA3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 145-179 amino acids from the C-terminal region of human 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	DPPA3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DPPA3
Synonyms	STELLAR
Function	Primordial germ cell (PGCs)-specific protein involved in epigenetic chromatin reprogramming in the zygote following fertilization (PubMed:35314832). 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 (By similarity). 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 (By similarity). Does not bind paternal chromatin, which is mainly packed into protamine and does not contain much H3K9me2 mark (By similarity). Also protects imprinted loci that are marked with H3K9me2 in mature sperm from DNA demethylation in early embryogenesis (By similarity). May be important for the totipotent/pluripotent states continuing through preimplantation development (By similarity). Also involved in chromatin condensation in oocytogenesis (By similarity).
Cellular Location	Nucleus. Cytoplasm. Note=Mainly localizes in the female pronucleus, localization to the male pronucleus in much weaker {ECO:0000250|UniProtKB:Q8QZY3}
Tissue Location	Low expression in testis, ovary and thymus. Expressed in embryonic stem and carcinoma cells. Highly expressed in testicular germ cell tumors.

Background

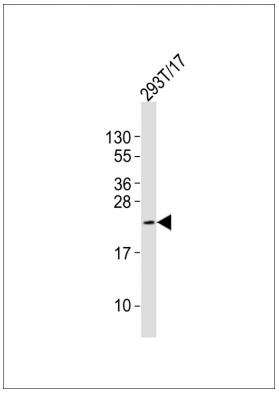
Primordial germ cell (PGCs)-specific protein involved in epigenetic chromatin reprogramming in the zygote following fertilization. In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted 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 (By similarity).

References

Payer B.,et al.Curr. Biol. 13:2110-2117(2003).
Clark A.T.,et al.Stem Cells 22:169-179(2004).
Julaton V.T.,et al.Hum. Mol. Genet. 20:2238-2250(2011).
Bowles J.,et al.Cytogenet. Genome Res. 101:261-265(2003).

Images

Anti-DPPA3 Antibody (C-term)at 1:1000 dilution + 293T/17 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 18 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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