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NALP5 Rabbit pAb

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Catalog # AP57350

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P59047
Reactivity	Rat
Predicted	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	134342
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NALP5
Epitope Specificity	101-200/1200
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion. Nucleus > nucleolus. Cytoplasm. In the subcortical cytoplasm of early embryos from the 1-cell to the blastocyst stages. From the 2-cell stage, still detected in the subcortex, but excluded from cell-cell contact regions.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene belongs to the NALP protein family. Members of the NALP protein family typically contain a NACHT domain, a NACHT-associated domain (NAD), a C-terminal leucine-rich repeat (LRR) region, and an N-terminal pyrin domain (PYD). Expression of this gene is restricted to the oocyte. A mouse gene that encodes a maternal oocyte protein, similar to this encoded protein, is required for normal early embryogenesis. [provided by RefSeq, Jul 2008]

Additional Information

Other Names	NACHT, LRR and PYD domains-containing protein 5, Mater protein homolog, Maternal Antigen that Embryos Require, NLRP5, MATER {ECO:0000303|PubMed:19542546}, NALP5
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

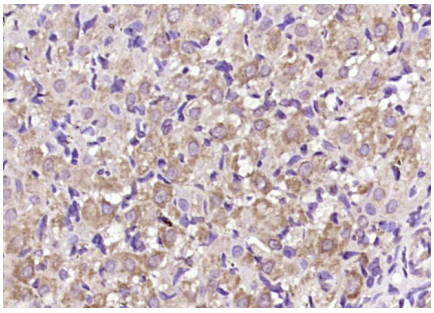
Name	NLRP5 {ECO:0000303|PubMed:38868925, ECO:0000312|HGNC:HGNC:21269}
Function	Component of the subcortical maternal complex (SCMC), a multiprotein complex that plays a key role in early embryonic development (PubMed:38868925). The SCMC complex is a structural constituent of cytoplasmic lattices, which consist in fibrous structures found in the cytoplasm of oocytes and preimplantation embryos (PubMed:41118754). They are required to store maternal proteins critical for embryonic development, such as ribosomal proteins, cytoskeletal tubulins and proteins controlling epigenetic reprogramming of the preimplantation embryo, in a poised but restrained state, regulating their availability for early embryonic development (PubMed:24374158, PubMed:38868925). Cytoplasmic lattices also tightly control ubiquitination during the oocyte-to-embryo transition by trapping E3 ubiquitin-protein ligase UHRF1 in a compact autoinhibited conformation and maintaining SCF ubiquitin ligase complexes inactive (PubMed:38868925). Required for the localization of cortical granules to the cortex of oocytes, via association with the cortical actin scaffold (By similarity). Required for cortical actin clearance prior to oocyte exocytosis and prevention of polyspermy (By similarity). Involved in regulating post-fertilization Ca(2+) release and endoplasmic reticulum storage (ER) storage via regulation of cellular localization (By similarity). May be involved in the localization of mitochondria to the cytoplasm and perinuclear region in oocytes and early stage embryos, independent of its role in CPL formation (By similarity).
Cellular Location	Cytoplasm. Cytoplasmic vesicle, secretory vesicle, Cortical granule. Mitochondrion. Nucleus, nucleolus. Golgi apparatus. Note=Core component of cytoplasmic lattices in oocytes (PubMed:37922900). In the subcortical cytoplasm of early embryos from the 1-cell to the blastocyst stages (By similarity). From the 2-cell stage, still detected in the subcortex, but excluded from cell-cell contact regions (By similarity). Expression largely disappears in blastocysts (By similarity). Located in mitochondria and nucleoli in primary follicle oocytes (By similarity) {ECO:0000250|UniProtKB:Q9R1M5, ECO:0000269|PubMed:37922900}
Tissue Location	Expressed in cumulus cells (at protein level) (PubMed:19542546). Highly abundant in oocytes and early embryos, however poorly expressed in somatic tissues such as the liver and spinal cord (PubMed:11925379, PubMed:30877238)

Background

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Images

Paraformaldehyde-fixed, paraffin embedded (rat ovary); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (NALP5) Polyclonal Antibody, Unconjugated (AP57350) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit)



(sp-0023) instructionsand DAB staining.

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