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ZP3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17235b

Product Information

Application	WB, E
Primary Accession	P21754
Other Accession	NP_001103824.1, NP_009086.4
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36988
Calculated MW	47018
Antigen Region	353-380

Additional Information

Gene ID	7784
Other Names	Zona pellucida sperm-binding protein 3, Sperm receptor, ZP3A/ZP3B, Zona pellucida glycoprotein 3, Zp-3, Zona pellucida protein C, Processed zona pellucida sperm-binding protein 3, ZP3, ZP3A, ZP3B, ZPC
Target/Specificity	This ZP3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 353-380 amino acids from the C-terminal region of human ZP3.
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	ZP3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ZP3
Synonyms	ZP3A, ZP3B, ZPC

Function	Component of the zona pellucida, an extracellular matrix surrounding oocytes which mediates sperm binding, induction of the acrosome reaction and prevents post-fertilization polyspermy. The zona pellucida is composed of 3 to 4 glycoproteins, ZP1, ZP2, ZP3, and ZP4. ZP3 is essential for sperm binding and zona matrix formation.
Cellular Location	[Processed zona pellucida sperm-binding protein 3]: Zona pellucida
Tissue Location	Expressed in oocytes (at protein level).

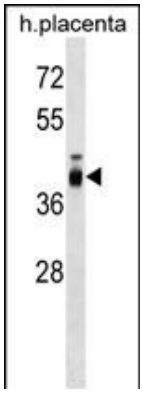
Background

The zona pellucida is an extracellular matrix that surrounds the oocyte and early embryo. It is composed primarily of three or four glycoproteins with various functions during fertilization and preimplantation development. The protein encoded by this gene is a structural component of the zona pellucida and functions in primary binding and induction of the sperm acrosome reaction. The nascent protein contains a N-terminal signal peptide sequence, a conserved ZP domain, a C-terminal consensus furin cleavage site, and a transmembrane domain. It is hypothesized that furin cleavage results in release of the mature protein from the plasma membrane for subsequent incorporation into the zona pellucida matrix. However, the requirement for furin cleavage in this process remains controversial based on mouse studies. A variation in the last exon of this gene has previously served as the basis for an additional ZP3 locus; however, sequence and literature review reveals that there is only one full-length ZP3 locus in the human genome. Another locus encoding a bipartite transcript designated POMZP3 contains a duplication of the last four exons of ZP3, including the above described variation, and maps closely to this gene.

References

Davila, S., et al. Genes Immun. 11(3):232-238(2010)
Bansal, P., et al. Biol. Reprod. 81(1):7-15(2009)
Choudhury, S., et al. J. Reprod. Immunol. 79(2):137-147(2009)
Chiu, P.C., et al. Biol. Reprod. 79(5):869-877(2008)
Tormala, R.M., et al. Mol. Cell. Endocrinol. 289 (1-2), 10-15 (2008) :

Images



ZP3 Antibody (C-term) (Cat. #AP17235b) western blot analysis in human placenta tissue lysates (35ug/lane).This demonstrates the ZP3 antibody detected the ZP3 protein (arrow).

Citations

- Serum antibody immunoreactivity to equine zona protein after SpayVac vaccination.

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