10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ZP4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12724b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q12836
Other Accession	NP_067009.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32332
Calculated MW	59400
Antigen Region	445-474

Additional Information

Gene ID	57829
Other Names	Zona pellucida sperm-binding protein 4, Zona pellucida glycoprotein 4, Zp-4, Zona pellucida protein B, Processed zona pellucida sperm-binding protein 4, ZP4, ZPB
Target/Specificity	This ZP4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 445-474 amino acids from the C-terminal region of human ZP4.
Dilution	WB~~1:2000 IHC-P~~1:100~500 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	ZP4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ZP4
Synonyms	ZPB

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. ZP4 may act as a sperm receptor.
Cellular Location	[Processed zona pellucida sperm-binding protein 4]: Zona pellucida {ECO:0000250|UniProtKB:Q00193}
Tissue Location	Expressed in oocytes.

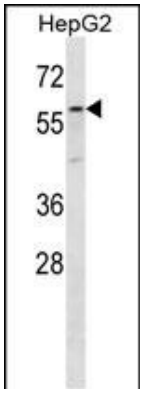
Background

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 nascent protein contains a N-terminal signal peptide sequence, a conserved ZP domain, a consensus furin cleavage site, and a C-terminal 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. Previously, this gene has been referred to as ZP1 or ZPB and thought to have similar functions as mouse Zp1. However, a human gene with higher similarity and chromosomal synteny to mouse Zp1 has been assigned the symbol ZP1 and this gene has been assigned the symbol ZP4.

References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
McCauley, J.L., et al. Genes Immun. 10(7):624-630(2009)
Nakano, M., et al. Proc. Natl. Acad. Sci. U.S.A. 106(31):12838-12842(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)

Images



ZP4 Antibody (C-term) (Cat. #AP12724b) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the ZP4 antibody detected the ZP4 protein (arrow).



ZP4 Antibdy (C-term) (Cat. #AP12724b)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of ZP4 Antibdy (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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'.