

Anti-ZP2 Picoband Antibody

Catalog # ABO12597

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	Q05996
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Zona pellucida sperm-binding protein 2(ZP2) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	7783
Other Names	Zona pellucida sperm-binding protein 2, Zona pellucida glycoprotein 2, Zp-2, Zona pellucida protein A, Processed zona pellucida sperm-binding protein 2, ZP2, ZPA
Calculated MW	82357
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, By Heat Western blot, 0.1-0.5 μ g/ml Immunohistochemistry(Frozen Section), 0.5-1 μ g/ml
Subcellular Localization	Processed zona pellucida sperm-binding protein 2: Secreted, extracellular space, extracellular matrix . The glycoproteinaceous translucent extracellular matrix that surrounds the mammalian oocyte is called zona pellucida. .
Source	Eukaryota
Protein Name	Zona pellucida sperm-binding protein 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ZP2 (511-544aa ENEYPLVRFLRQPIYMEVRVLNRDDPNIKLVLDD), different from the related mouse sequence by six amino acids, and from the related rat sequence by four amino acids.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	ZP2
Synonyms	ZPA
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 (PubMed: 29895852). The zona pellucida is composed of 3 to 4 glycoproteins, ZP1, ZP2, ZP3, and ZP4. ZP2 may act as a secondary sperm receptor (PubMed: 29895852).
Cellular Location	[Processed zona pellucida sperm-binding protein 2]: Zona pellucida
Tissue Location	Expressed in oocytes(at protein level).

Background

Zona pellucida sperm-binding protein 2 is a protein that in humans is encoded by the ZP2 gene. The sperm-binding domain on the ZP2 protein is necessary in both humans and mice for oocyte-sperm recognition and penetration of the zona pellucida. It is also responsible for the primary block to polyspermy in mammals. The oocyte has cortical granules peripherally located under the cortex that contain a proteolytic protein called ovastacin. After the sperm binds to ZP2, the cortical granules are exocytosed releasing ovastacin into the perivitelline space. Ovastacin cleaves ZP2 at the N terminus, preventing more sperm from binding and penetrating the oocyte, thus hardening the zona pellucida. Ovastacin is only found in oocytes, and is part of the astacin family of metalloendoproteases. Female mice engineered without ovastacin showed that ZP2 was not cleaved after fertilization.

Images



Western blot analysis of ZP2 expression in HELA whole cell lysates (lane 1) and HEPG2 whole cell lysates (lane 2). ZP2 at 82KD was detected using rabbit anti- ZP2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12597) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

ZP2 was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- ZP2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12597) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

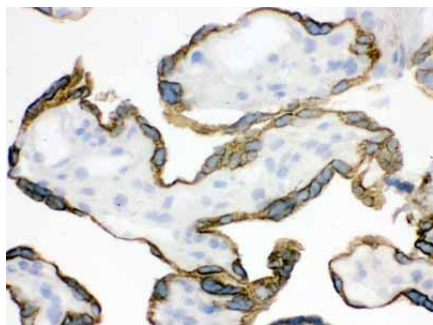
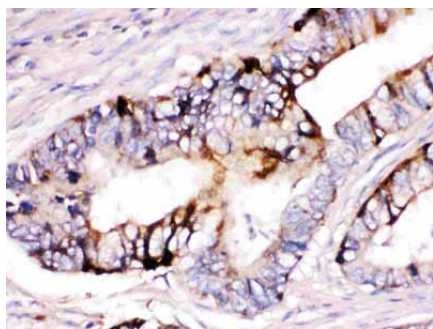


Figure 3. IHC analysis of ZP2 using anti-ZP2 antibody (ABO12597). ZP2 was detected in frozen section of human placenta tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml rabbit anti-ZP2 Antibody (ABO12597) overnight at 4 °C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 °C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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