

## Anti-ZP2 Antibody Picoband®

Catalog Number: PB9912

### About ZP2

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.

### Overview

Product Name	Anti-ZP2 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-ZP2 Antibody Picoband® catalog # PB9912. Tested in IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q05996

### Technical Details

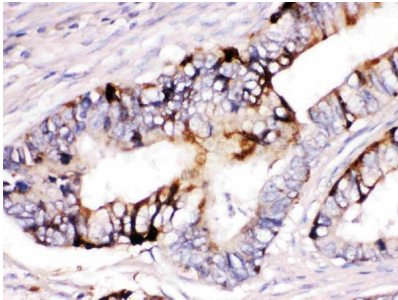
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ZP2, different from the related mouse sequence by six amino acids, and from the related rat sequence by four amino acids.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Western blot, 0.1-0.5ug/ml Immunohistochemistry (Frozen Section), 0.5-1ug/ml

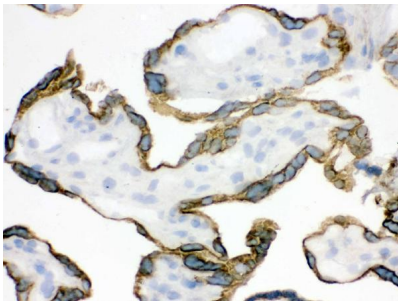
## Anti-ZP2 Antibody Picoband® (PB9912) Images



Western blot analysis of ZP2 using anti-ZP2 antibody (PB9912). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: HELA whole cell lysates, Lane 2: HEPG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ZP2 antigen affinity purified polyclonal antibody (Catalog # PB9912) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ZP2 at approximately 82 kDa. The expected band size for ZP2 is at 82 kDa.



IHC analysis of ZP2 using anti-ZP2 antibody (PB9912). ZP2 was detected in a paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-ZP2 Antibody (PB9912) 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) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of ZP2 using anti-ZP2 antibody (PB9912). ZP2 was detected in frozen section of human placenta tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ZP2 Antibody (PB9912) 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)(Catalog # SA1022) with DAB as the chromogen.

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