SANTA CRUZ BIOTECHNOLOGY, INC.

ZP1 (M-238): sc-134758

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mammalian zona pellucida is composed of three major glycoproteins, ZP1, ZP2 and ZP3. ZP2 has been implicated as a secondary sperm receptor that binds sperm only after the induction of the sperm acrosome reaction. Both ZP2 and ZP3 are modified by the zona reaction; ZP2 undergoes a proteolytic cleavage and ZP3 loses its ability to induce the acrosome reaction and its sperm receptor activity. During the process of fertilization, the initial interaction between male and female gametes is mediated by a sperm receptor, ZP3, which resides in the extracellular glycoprotein matrix (zona pellucida) surrounding the oocyte. The sperm receptor function of the ZP3 molecule plays a key role in the first step of the fertilization process. Following sperm-oocyte binding, ZP3 triggers the sperm acrosome reaction that releases the protein machinery, enabling a spermatozoon to penetrate the zona pellucida.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ZP1 (human) mapping to 11q12.2; Zp1 (mouse) mapping to 19 A.

SOURCE

ZP1 (M-238) is a rabbit polyclonal antibody raised against amino acids 27-264 mapping near the N-terminus of ZP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ZP1 (M-238) is recommended for detection of ZP1 (Zona pellucida glycoprotein 1) of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ZP1 siRNA (h): sc-61831, ZP1 siRNA (m): sc-41134, ZP1 shRNA Plasmid (h): sc-61831-SH, ZP1 shRNA Plasmid (m): sc-41134-SH, ZP1 shRNA (h) Lentiviral Particles: sc-61831-V and ZP1 shRNA (m) Lentiviral Particles: sc-41134-V.

Molecular Weight of glycosylated ZP1: 132 kDa.

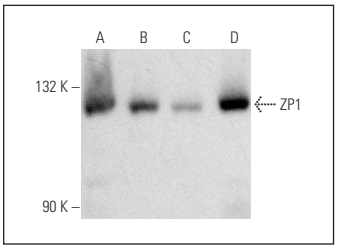
Molecular Weight of deglycosylated ZP1: 63 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, 3611-RF whole cell lysate: sc-2215.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ZP1 (M-238): sc-134758. Western blot analysis of ZP1 expression in ES-2 (**A**), 3611-RF (**B**), KNRK (**C**) and Hep G2 (**D**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.