

ZP2 (C-7): sc-390422

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.

CHROMOSOMAL LOCATION

Genetic locus: ZP2 (human) mapping to 16p12.2; Zp2 (mouse) mapping to 7 F2.

SOURCE

ZP2 (C-7) is a mouse monoclonal antibody raised against amino acids 41-340 mapping within an extracellular domain of ZP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZP2 (C-7) is available conjugated to agarose (sc-390422 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390422 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390422 PE), fluorescein (sc-390422 FITC), Alexa Fluor[®] 488 (sc-390422 AF488), Alexa Fluor[®] 546 (sc-390422 AF546), Alexa Fluor[®] 594 (sc-390422 AF594) or Alexa Fluor[®] 647 (sc-390422 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390422 AF680) or Alexa Fluor[®] 790 (sc-390422 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ZP2 (C-7) is recommended for detection of ZP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 ZP2 siRNA (h): sc-44886, ZP2 siRNA (m): sc-41135, ZP2 shRNA Plasmid (h): sc-44886-SH, ZP2 shRNA Plasmid (m): sc-41135-SH, ZP2 shRNA (h) Lentiviral Particles: sc-44886-V and ZP2 shRNA (m) Lentiviral Particles: sc-41135-V.

Molecular Weight of human ZP2: 64-80 kDa.

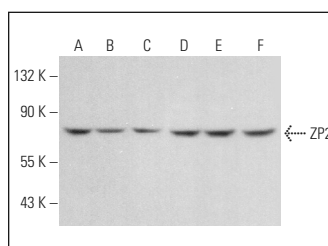
Molecular Weight of mouse ZP2: 120-140 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or c4 whole cell lysate: sc-364186.

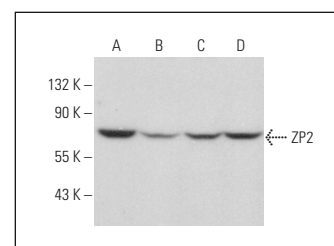
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



ZP2 (C-7): sc-390422. Western blot analysis of ZP2 expression in HeLa (A), Jurkat (B), 3611-RF (C), Neuro-2A (D), NIH/3T3 (E) and KNRK (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



ZP2 (C-7): sc-390422. Western blot analysis of ZP2 expression in HOS (A), SW480 (B), c4 (C) and TK-1 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Costa, J., et al. 2018. Structural and molecular analysis of the cancer prostate cell line PC3: oocyte zona pellucida glycoproteins. *Tissue Cell* 55: 91-106.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.