

ZBPB1 (F-12): sc-393152

BACKGROUND

ZBPB1 (zona pellucida-binding protein 1) is a 351 amino acid gene product belonging to the zona pellucida-binding protein Sp38 family. ZBPB1 is a secreted protein believed to be involved in gamete interaction during fertilization. ZBPB1 is found on chromosome 7 which is about 158 million bases long, encodes over 1,000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

1. Yu, Y., et al. 2006. The extracellular protein coat of the inner acrosomal membrane is involved in zona pellucida binding and penetration during fertilization: characterization of its most prominent polypeptide (IAM38). *Dev. Biol.* 290: 32-43.
2. Lin, Y.N., et al. 2007. Loss of zona pellucida binding proteins in the acrosomal matrix disrupts acrosome biogenesis and sperm morphogenesis. *Mol. Cell. Biol.* 27: 6794-6805.

CHROMOSOMAL LOCATION

Genetic locus: ZBPB (human) mapping to 7p12.2; Zbp (mouse) mapping to 11 A1.

SOURCE

ZBPB1 (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 309-338 near the C-terminus of ZBPB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZBPB1 (F-12) is available conjugated to agarose (sc-393152 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393152 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393152 PE), fluorescein (sc-393152 FITC), Alexa Fluor® 488 (sc-393152 AF488), Alexa Fluor® 546 (sc-393152 AF546), Alexa Fluor® 594 (sc-393152 AF594) or Alexa Fluor® 647 (sc-393152 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393152 AF680) or Alexa Fluor® 790 (sc-393152 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393152 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

ZBPB1 (F-12) is recommended for detection of ZBPB1 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).

ZBPB1 (F-12) is also recommended for detection of ZBPB1 in additional species, including equine.

Suitable for use as control antibody for ZBPB1 siRNA (h): sc-89372, ZBPB1 siRNA (m): sc-155826, ZBPB1 shRNA Plasmid (h): sc-89372-SH, ZBPB1 shRNA Plasmid (m): sc-155826-SH, ZBPB1 shRNA (h) Lentiviral Particles: sc-89372-V and ZBPB1 shRNA (m) Lentiviral Particles: sc-155826-V.

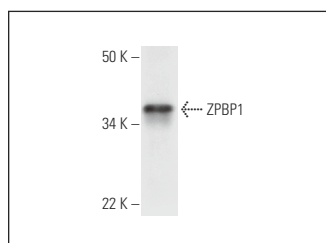
Molecular Weight of ZBPB1: 41 kDa.

Positive Controls: human testis extract: sc-363781.

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



ZBPB1 (F-12): sc-393152. Western blot analysis of ZBPB1 expression in human testis tissue extract.

SELECT PRODUCT CITATIONS

1. Jiang, S., et al. 2019. Fluoride exposure arrests the acrosome formation during spermatogenesis via down-regulated ZBPB1, Spaca1 and Dpy19l2 expression in rat testes. *Chemosphere* 226: 874-882.
2. Oud, M.S., et al. 2020. Exome sequencing reveals novel causes as well as new candidate genes for human globozoospermia. *Hum. Reprod.* 35: 240-252.

RESEARCH USE

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