

Protamine 3 (C-13): sc-165292

BACKGROUND

Protamines are small, arginine-rich (basic), nuclear proteins that mediate normal sperm head condensation and DNA stabilization. Mice, humans and certain fish possess two or more different protamines, whereas sperm of bull, boar, rat, rabbit, guinea pig and ram have one form of protamine. The majority of DNA in human sperm is bound to protamines, with only a small proportion of DNA bound to histones in a way similar to active chromatin. The retention of histone association with sperm DNA, with respect to protamine association to sperm DNA, can change within as little as 400 bp of DNA, suggesting fine control over haploid DNA organization. Protamines eventually replace histones late in the haploid phase of spermatogenesis. Protamine 3, also known as PRM3 or sperm protamine P3, is a 103 amino acid protein that belongs to the protamine-P3 family and localizes to nucleus. Protamine 3 is encoded by a gene that maps to human chromosome 16p13.13.

REFERENCES

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- Giorgini, F., et al. 2001. MSY2 and MSY4 bind a conserved sequence in the 3' untranslated region of protamine 1 mRNA *in vitro* and *in vivo*. *Mol. Cell. Biol.* 21: 7010-7019.
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CHROMOSOMAL LOCATION

Genetic locus: PRM3 (human) mapping to 16p13.13.

SOURCE

Protamine 3 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Protamine 3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-165292 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Protamine 3 (C-13) is recommended for detection of Protamine 3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Protamine 1 or Protamine 2.

Suitable for use as control antibody for Protamine 3 siRNA (h): sc-93525, Protamine 3 shRNA Plasmid (h): sc-93525-SH and Protamine 3 shRNA (h) Lentiviral Particles: sc-93525-V.

Molecular Weight of Protamine 3: 11 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.