

Acrosin (C-14): sc-46284

BACKGROUND

Acrosin, a member of the peptidase S1 family, is a major protease present in the acrosome of mature mammalian spermatozoa. Acrosin is a typical serine proteinase with trypsin-like cleavage specificity. The zymogen form, proacrosin, is the precursor of Acrosin synthesized only in the postmeiotic stages of spermatogenesis. The active enzyme functions in the lysis of the zona pellucida, allowing the penetration of sperm through the innermost glycoprotein layers of the ovum.

REFERENCES

1. Peknicova, J., et al. 1990. Monoclonal antibodies against boar acrosomal antigens labelling undamaged acrosomes of spermatozoa in immunofluorescence test. *Andrologia* 22: 427-435.
2. Moos, J., et al. 1993. Protein-protein interactions controlling Acrosin release and solubilization during the boar sperm acrosome reaction. *Biol. Reprod.* 49: 408-415.
3. Peknicová, J., et al. 2001. Monoclonal antibodies to intra-acrosomal proteins inhibit gamete binding *in vitro*. *Theriogenology* 56: 211-223.
4. Zalata, A., et al. 2004. Relationship between Acrosin activity of human spermatozoa and oxidative stress. *Asian J. Androl.* 6: 313-318.
5. Chaudhury, K., et al. 2004. Studies on the membrane integrity of human sperm treated with a new injectable male contraceptive. *Hum. Reprod.* 19: 1826-1830.
6. Wang, H., et al. 2004. Novel role for a sterol response element binding protein in directing spermatogenic cell-specific gene expression. *Mol. Cell Biol.* 24: 10681-10688.

CHROMOSOMAL LOCATION

Genetic locus: ACR (human) mapping to 22q13.33; Acr (mouse) mapping to 15 E3.

SOURCE

Acrosin (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Acrosin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46284 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Acrosin (C-14) is recommended for detection of Acrosin of mouse, rat and 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 Acrosin siRNA (h): sc-45604, Acrosin siRNA (m): sc-45605, Acrosin shRNA Plasmid (h): sc-45604-SH, Acrosin shRNA Plasmid (m): sc-45605-SH, Acrosin shRNA (h) Lentiviral Particles: sc-45604-V and Acrosin shRNA (m) Lentiviral Particles: sc-45605-V.

Molecular Weight of proacrosin: 55/53/49 kDa.

Molecular Weight of intermediate Acrosin: 43 kDa.

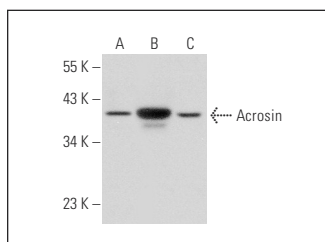
Molecular Weight of mature Acrosin: 35 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

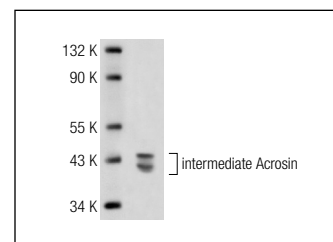
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Acrosin (C-14): sc-46284. Western blot analysis of Acrosin expression in HeLa (A), NIH/3T3 (B) and KNRK (C) whole cell lysates.



Acrosin (C-14): sc-46284. Western blot analysis of intermediate Acrosin expression in NTERA-2 cl.D1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chandrasekhar, A., et al. 2011. Modulation of nicotinamide adenine dinucleotide phosphate oxidase activity through sequential posttranslational modifications of p22 phagocytic oxidase during capacitation and acrosome reaction in goat spermatozoa. *J. Anim. Sci.* 89: 2995-3007.

RESEARCH USE

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