

Acrosin (ACR-2): sc-51504

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

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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. Peknicova, J., et al. 2001. Monoclonal antibodies to intra-acrosomal proteins inhibit gamete binding *in vitro*. *Theriogenology* 56: 211-223.
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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.
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8. Chaudhury, K., et al. 2005. Acrosin activity as a potential marker for sperm membrane characteristics in unexplained male infertility. *Fertil. Steril.* 83: 104-109.
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SOURCE

Acrosin (ACR-2) is a mouse monoclonal antibody raised against acid extracts from spermatozoa of porcine origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Acrosin (ACR-2) is recommended for detection of various forms of Acrosin (55, 53, 45 and 35 kDa) in the acrosome of undamaged spermatozoa of porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

Molecular Weight of intermediate Acrosin: 43 kDa.

Molecular Weight of mature Acrosin: 35 kDa.

SELECT PRODUCT CITATIONS

1. Lee, W.Y., et al. 2017. Characterization of male germ cell markers in canine testis. *Anim. Reprod. Sci.* 182: 1-8.
2. Hur, T.Y., et al. 2017. Dose-dependent effects of busulfan on dog testes in preparation for spermatogonial stem cell transplantation. *Lab. Anim. Res.* 33: 264-269.
3. Lee, W.Y., et al. 2017. Analysis of putative biomarkers of undifferentiated spermatogonia in dog testis. *Anim. Reprod. Sci.* 185: 174-180.
4. Lee, R., et al. 2018. Stage-specific expression of DDX4 and c-Kit at different developmental stages of the porcine testis. *Anim. Reprod. Sci.* 190: 18-26.
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6. Covarrubias, A.A., et al. 2022. Differential distribution and activity profile of acylpeptide hydrolase in the rat seminiferous epithelium. *Biomedicines* 10: 1591.

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.