# Intra-acrosomal protein (Ds-2): sc-51659



The Power to Question

## **BACKGROUND**

The Intra-acrosomal protein, also known as acrosomal vesicle protein 1 and acrosomal protein SP-10, is a testis-specific, differentiation antigen that arises within the acrosomal vesicle during spermatogenesis and is associated with the acrosomal membranes and matrix of mature sperm. The gene encoding the Intra-acrosomal protein consists of four exons. Alternative splicing generates 11 distinct transcripts, which encode protein isoforms ranging from 81 to 265 amino acids. The longest transcript is the most abundant, comprising 53-72% of the total Intra-acrosomal protein messages. The second largest transcript comprises 15-32%; the third and the fourth largest transcripts account for 3.4-8.3% and 8.7-12.5%, respectively; and the remaining seven transcripts combined account for less than 1% of the total Intra-acrosomal protein message. Research suggests that phenomena of cryptic splicing and exon skipping occur within this gene. Intra-acrosomal protein may be involved in sperm-zona binding or penetration and is a potential contraceptive vaccine immunogen for humans.

## **REFERENCES**

- 1. Wright, R.M., et al. 1990. Cloning and sequencing of cDNAs coding for the human Intra-acrosomal antigen SP-10. Biol. Reprod. 42: 693-701.
- 2. Herr, J.C., et al. 1991. Assignment of the gene for human Intra-acrosomal protein SP-10 to the p12→q13 region of chromosome 11. J. Androl. 12: 281-287.
- 3. Herr, J.C., et al. 1992. Purification and microsequencing of the Intraacrosomal protein SP-10. Evidence that SP-10 heterogeneity results from endoproteolytic processes. Biol. Reprod. 47: 11-20.
- 4. Wright, R.M., et al. 1993. Cloning and characterization of the gene coding for the human acrosomal protein SP-10. Biol. Reprod. 49: 316-25.
- 5. Kurth, B.E., et al. 1993. Stage-specific detection of mRNA for the sperm antigen SP-10 in human testes. Anat. Rec. 236: 619-625.
- 6. Golden, W.L., et al. 1993. Refinement of the localization of the gene for human intraacrosomal protein SP-10 (ACRV1) to the junction of bands q23→q24 of chromosome 11 by nonisotopic *in situ* hybridization. Genomics 18: 446-449.
- Freemerman, A.J., et al. 1994. Tissue specificity of the acrosomal protein SP-10: a contraceptive vaccine candidate molecule. Biol. Reprod. 50: 615-621.
- 8. Coonrod, S.A., et al. 1996. Inhibition of bovine fertilization *in vitro* by antibodies to SP-10. J. Reprod. Fertil. 107: 287-297.
- 9. Peknicova, J., et al. 2001. Monoclonal antibodies to Intra-acrosomal proteins inhibit gamete binding *in vitro*. Theriogenology 56: 211-223.

# **SOURCE**

Intra-acrosomal protein (Ds-2) is a mouse monoclonal antibody raised against purified spermatozoa of canine origin.

## **PRODUCT**

Each vial contains 100  $\mu g$  lgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

#### **APPLICATIONS**

Intra-acrosomal protein (Ds-2) is recommended for detection of intra-acrosomal proteins (92 and 42 kDa) of canine 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).

# **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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com