

The secretory origin and temporal appearance of the porcine beta-microseminoprotein (sperm motility inhibitor) in the boar reproductive system.

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摘要

Abstract

A specific antiserum against the porcine sperm motility inhibitor (SMI) was used in Western blotting analysis of tissue homogenates to reveal the possible origin of SMI in the boar reproductive system at different ages. The ages of the boar used were day 0, day 15, day 30, day 60, day 100, day 120, day 135, day 150, and day 210. The tissue homogenates of the day 60 and older showed immunoreaction. The results were further checked by indirect immunohistochemical staining and observed under light microscope. The SMI antigen appeared in the epithelial cells and in the lumen of the secretory ducts of the prostate gland. These results indicate that porcine SMI is synthesized only by the postnatal prostate gland. The homogenate of the prostate gland of day 100 was also used for the purification of SMI. The prostatic SMI was co-eluted with the seminal SMI in the reversed phase HPLC. Mass spectrometric analysis of the prostatic SMI revealed a molecular weight of 10,066. These results indicate that the prostatic SMI is identical to that purified from seminal plasma (Jeng et al., 1993; *Biochem Biophys Res Communi* 191:435-440).