

**The porcine sperm motility inhibitor is  
identical to  $\beta$ -microseminoprotein and is  
a competitive inhibitor of Na<sup>+</sup>,  
K<sup>+</sup>-ATPase**

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摘要

**Abstract**

We have isolated a small porcine seminal protein called SMI-1. Our results from peptide sequence, amino acid composition and mass spectral analyses reveal that SMI-1 is identical to porcine beta-microseminoprotein, a protein with unknown function. We also report here that this protein inhibits competitively the activity of Na<sup>+</sup>,K(+)-ATPase purified from porcine cerebral cortex in a dose-dependent manner. The inhibitory effect could be reversed by the addition of ATP. The half-maximal inhibition was achieved at an inhibitor concentration of 90 microM.