

PURIFICATION, PRELIMINARY CHARACTERIZATION AND
IMMUNOHISTOCHEMICAL LOCALIZATION OF POSVP21 IN THE
SAND RAT (*PSAMMOMYS OBESUS*) SEMINAL VESICLES

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The time for reproduction in desert-based is strongly correlated to the availability of water and food in their habitat. The sand rat (*Psammomys obesus*), a protected species, is a experimentally interesting rodent to study: (i) the physiology of mammalian reproduction and (ii) androgen-dependent proteins.

A major secretory protein band (M.W. 21000) regulated by testosterone was resolved by SDS-PAGE from sand rat seminal vesicles during breeding season.

No other androgen-dependent protein was detected in this molecular weight range. When analysed by NephGE the protein band of 21000 appeared to be composed of a 3 least visible spots with pHi values varying from 4 to 7. Quantitatively, the 21 kDa protein synthesized in large amounts when the androgen level increases, and accounts for over 22% of soluble proteins from homogenate of seminal vesicles during breeding season. Its partially internal sequence was identified and exhibits five peptides; the 21 kDa designed as POSVP21 (*Psammomys obesus* seminal vesicles protein 21 kDa) has been purified in high yield from polyacrylamide gels using electro elution.

Polyclonal antibodies against POSVP21, were raised in rabbits, selected according to their capacity to specifically recognize the protein and purified by affinity chromatography. The Polyclonal antibodies were also used to study immunohistochemical antigen localization by the avidin-biotin peroxidase procedure. Immunohistochemical staining using the Polyclonal antibodies specific for POSVP21 was performed to localize the protein in histological sections of different parts of the seminal vesicles. The secretory epithelium of seminal vesicle showed a strong immunohistochemical reaction by indirect peroxidase staining. The distribution of POSVP21 in various sections of seminal vesicles was analyzed and observation showed that it was localized in the cytoplasm of epithelial cells and in secretory products in the lumen. The connective tissues and nucleus had negative immunoreactions for POSVP21.