Abstract

Development of venom gland cell culture from *Trimeresurus gramineus* (Taiwan green habu) to produce venom is important as an additional source to manufacture antivenom and as a source of useful biologically active molecules to become novel therapeutic agents, diagnosis and research tool. We use the immunohistochemistry to identify venom gland cell and under optimal condition ten thousand epithelial cells can be obtained from venom gland by magnetic purification method. Among thirteen attempts to culture the snake cells, we found that the epithelial gland cells can be successfully maintained in culture wells precoated with green habu skin collagen, and for cultivation of kidney cells precoating is not necessary. The cultures of epithelial cells can be maintained for more than 1 month, but cannot proliferate in CMRL 1066 plus 10% fetal bovine serum at 30℃。The kidney cells can be maintained up to more than fifth passage. Using SDS-PAGE, western blotting and ELISA tested the presence of venom in the supernatant of epithelial cells and kidney cells. These results indicated that in the culture supernatant of epithelial cells there's different protein molecule expressed in SDS-PAGE and western blotting compared to that of control group. The culture supernatant of epithelial cells also contained various amount of venom at different days by ELISA assay.

Keywords：snake；venom；venom gland cell culture；trimeresurus gramineus