



## Antibody study in canine distemper virus nucleocapsid protein gene-immunized mice

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**ABSTRACT.** The gene for the nucleocapsid (N) protein of canine distemper virus was cloned into the pMD-18T vector, and positive recombinant plasmids were obtained by enzyme digestion and sequencing. After digestion by both *EcoRI* and *KpnI*, the plasmid was directionally cloned into the eukaryotic expression vector pcDNA; the positive clone pcDNA-N was screened by electrophoresis and then transfected into COS-7 cells. Immunofluorescence analysis results showed that the canine distemper virus N protein was expressed in the cytoplasm of transfected COS-7 cells. After emulsification in Freund's adjuvant, the recombinant plasmid pcDNA-N was injected into the abdominal cavity of 8-week-old BABL/c mice, with the pcDNA original vector used as a negative control. Mice were immunized 3 times every 2 weeks. The blood of immunized mice was drawn 2 weeks after completing the immunizations to measure titer levels. The antibody titer in the pcDNA-N test was  $10^{1.62 \pm 0.164}$ , while in the control group this value was  $10^{0.52 \pm 0.56}$ , indicating that specific humoral immunity was induced in canine distemper virus nucleocapsid protein-immunized mice.

**Key words:** Canine distemper virus; Eukaryotic expression; Gene immunity