



Title	STUDIES ON ANTITUMOR EFFECT IN NUDE MICE BEARING TUMORS BY MONOCLONAL ANTIBODY AGAINST TUMOR-ASSOCIATED ANTIGEN OF BOVINE LEUKOSIS AND THE MONOCLONAL ANTIBODY CONJUGATED TO ADRIAMYCIN ENTRAPPED IN LIPOSOMES
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Antitumor effects were investigated in nude mice bearing bovine lymphoid tumors by monoclonal antibody (MoAb) against tumor-associated antigens (TAA) expressed in the leukemia cells of enzootic bovine leukosis (EBL) and the monoclonal antibody conjugated to liposomes containing adriamycin (ADM).

The following results were obtained :

1) After mouse MoAb c 143 was purified, F(ab')₂ fragments were generated by pepsin digestion and radiolabeled with ¹²⁵I. ¹²⁵I-labeled c 143 F(ab')₂ were injected into nude mice bearing bovine lymphoid tumors (BLSCKU-1 lines of leukemic cells of EBL). The fragments specifically located in the tumors and not in normal tissues, as determined by differential counting of tissue radioactivity (cpm/mg). Tumors (BLSCKU-1 cells) could be detected by whole-body scintigraphy with radiolabeled specific antibody F(ab')₂ fragments without background subtraction, and also by the scattering of silver grains by light microscopic autoradiography.

2) From 18 hours after inoculation of BLSCKU-1 cells into nude mice, MoAb was intraperitoneally inoculated every other day. The MoAb c 143 group showed no significant differences among MoAb c 143, mixed and control groups.

3) In the chronological observations of inoculated sites of the MoAb c 143 group from the histopathological viewpoint, from 3 days after inoculation of BLSCKU-1 cells, macrophagic reaction appeared, and after 1 or 2 weeks of inoculation, marked macrophagic reaction was revealed. After 5.5 weeks of inoculation, differentiation was difficult to make between the MoAb c 143 and control groups.

4) MoAb c 143 conjugated to liposomes containing ADM was inoculated into nude mice bearing tumors (BLSCK-1 cells) 3 times every 3 or 4 days. This group showed a more significant antitumor effect than the control. But histopathologically there were no significant differences between the groups of ADM and the control.