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PREPARATION OF MONOCLONAL ANTIBODIES AGAINST
CANINE LYMPHOCYTE SURFACE ANTIGENS

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Seven monoclonal antibodies (MoAb ; CLS-1, -2, -3, -13, -23, and -38) against canine peripheral blood lymphocytes (PBL) were prepared and their reactivity against several kinds of lymphoid cell populations investigated by flow cytometry (FCM) and by studying the distribution of positive cells in lymphoid tissue as shown by histochemical immunoperoxidase stains.

CLS-1 reacted with some populations of T and some of the B lymphocytes in PBL on FCM, and CLS-1 positive cells were distributed as shown immunohistochemically in the outer cortex area of the thymus and in the paracortical area of lymph nodes. CLS-28 also reacted with some populations of T and some B cells similarly to CLS-1, but the positive cells were localized in the area of the thymic medulla. These data suggest that CLS-1 recognized mainly immature T lymphocytes, and CLS-28 recognized mainly more mature T lymphocytes.

CLS-2, -13, -23, and -38 reacted with over 90 % of PBL and the lymphocytes induced from lymphoid tissues as shown by FCM. These MoAb reacted with lymphocytes throughout the thymus and spleen, and in the paracortical area of lymph nodes as observed with immunoperoxidase stains. However, they reacted only slightly with lymphatic follicle cells. It is therefore suggested that the four MoAb recognized cell-surface antigens exist in most lymphocytes, but the antigen appears more frequently on the surface of T lymphocytes than on B lymphocytes.

CLS-3 reacted strongly with half of the T lymphocytes and reacted weakly with a small population of B lymphocytes. It also reacted with lymphocytes in the thymic medulla and paracortical area. These data suggest that CLS-3 recognizes the cell-surface antigen which appears on mature T lymphocytes.