G101 T cell responses to MethA fibrosarcomas expressing membrane-bound form of cytokines

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MethA tumor cells were transfected with engineered cytokine cDNAs (IL-2 and IL-4). The secretory form of IL-2 or IL-4 cDNA was modified to be expressed as membrane-bound forms. To express as membrane-bound forms, the cytokine cDNAs were fused with CD4 or TNFa cDNA. The MethA tumor cells expressing a membrane-bound form of cytokine were stimulatory for cytokine-dependent T cell lines in vitro. When the purified allogeneic T cells were mixed-cultured with MethA clones, $CD8^+$ T cells were prominently amplified. These results suggest that the MethA tumor cells expressing membrane-bound form of the cytokines are stimulatory to $CD8^+$ T cells by direct cell-to-cell contact, and the membrane-bound form of cytokines function as a co-stimulatory signal.

G102 IL-4 supports the proliferation of IC-2, an IL-3 dependent mast cell line

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Apoptosis of bone marrow progenitor cells plays an important role in control of hematopoiesis. Among the growth factors involved in hematopoiesis, IL-3 affects the wide variety of cell types. It influences the growth and activation of lymphocytes, promotes the self-renewal of hematopoietic progenitor cells. The hematopoietic cells undergo apoptotic cell death under conditions such as the lack of growth factors. As a in vitro model system to study the mechanism of apoptosis induced by deprivation of growth factor, a mast cell origin IC-2 cells dependent on IL-3 was analyzed. The characteristics of apoptosis, DNA fragmentation and inhibition of proliferation were recognized. However, exogenous IL-4 rescued from the cell death by IL-3 deprivation. The nature of the network by IL-3 and IL-4 is on study.