DI-Leu16-IL2 Immunocytokine

National Cancer Institute

Source

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A recombinant fusion protein consisting of de-immunized and humanized anti-CD20 monoclonal antibody Leu16 fused to human cytokine interleukin-2 (IL2) with potential antineoplastic activity. The antibody moiety of DI-Leu16-IL2 immunocytokine binds to tumor cells expressing the CD20 antigen, which may result in an antibody-dependent cell-mediated cytotoxicity (ADCC) towards CD20-expressing tumor cells; the localized IL2 moiety of this fusion protein may stimulate natural killer (NK) and T-lymphocyte mediated immune responses, enhancing the ADCC response. De-immunization involves the modification of potential helper T cell epitopes that bind to MHC class II molecules; humanization involves combining recombinant murine variable (V) regions with human immunoglobulin light and heavy chain constant regions. CD20 antigen, a hydrophobic transmembrane protein located on normal pre-B and mature B lymphocytes, is overexpressed by various cancer cell types.