

Anti-CD30 human IL-2 fusion proteins display strong and specific cytotoxicity in vivo.

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Source

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Abstract

Although therapy of CD30-positive lymphomas such as classical Hodgkin lymphoma and anaplastic large cell lymphoma has been improved considerably during the last decades, patients suffer from high toxicity of current therapeutic regimens. Since CD30 expression is very restricted, CD30-positive tumors are well suited for immunotherapeutic approaches. Several distinct immunotherapeutic approaches with chimeric, humanized, and bispecific antibodies as well as immunotoxins are already described. In this report, we give a short overview of CD30-targeting approaches in humans. Furthermore, we introduce two novel anti-CD30 fusion proteins consisting of the single chain variable fragment of the CD30 monoclonal antibody Ber-H2 and human interleukin-2, evaluate their biological activity in a human CD30-positive syngeneic murine model, and demonstrate the immunological mechanisms leading to tumor rejection by these reagents. The data indicate that there are several promising approaches in CD30-targeted immunotherapy. The findings of the anti-CD30 IL-2 constructs suggest that these fusion proteins are particularly useful to remove small, residual tumors.