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Anti-CD123/CD3 BiTE Antibody SAR440234

National Cancer Institute

Source

National Cancer Institute. *Anti-CD123/CD3 BiTE Antibody SAR440234*. NCI Thesaurus. Code C160348.

A bispecific T-cell engager (BiTE) antibody comprised of a humanized Fc-silenced immunoglobulin G1 (IgG1) backbone and two single-chain variable fragments (scFvs): one directed against the CD3 antigen expressed on T-lymphocytes and another directed against the alpha-chain of the interleukin-3 receptor (IL-3RA; CD123), with potential immunostimulating and antineoplastic activities. Upon intravenous infusion, anti-CD123/CD3 BiTE antibody SAR440234 binds to both CD3 expressed on T-cells and CD123 expressed on tumor cells. This activates and redirects cytotoxic T-lymphocytes (CTLs) to CD123-expressing tumor cells, leading to enhanced CTL-mediated elimination of CD123-expressing tumor cells. CD123 is overexpressed in a variety of hematological malignancies; its expression is low or absent in normal hematopoietic progenitors and stem cells.