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Anti-CD33/CD3 Bispecific Antibody GEM 333

National Cancer Institute

Source

National Cancer Institute. *Anti-CD33/CD3 Bispecific Antibody GEM 333*. NCI Thesaurus. Code C155970.

A bispecific antibody possessing two antigen-recognition and binding sites, one for the CD3 complex, a group of T-cell surface glycoproteins that complex with the T-cell receptor (TCR), and one for the tumor-associated antigen (TAA) CD33, with potential immunostimulating and antineoplastic activities. Upon administration of anti-CD33/CD3 bispecific antibody GEM 333, this bispecific antibody binds to both the CD3 antigen on cytotoxic T-lymphocytes (CTLs) and the CD33 antigen found on CD33-expressing tumor cells, thereby crosslinking tumor cells and CTLs. This activates and redirects CTLs to CD33-expressing tumor cells, which results in the CTL-mediated cell death of CD33-expressing tumor cells. CD33, a myeloid differentiation antigen, is expressed on normal non-pluripotent hematopoietic stem and progenitor cells (HSPCs) and is overexpressed on a variety of cancer cell types, including acute myeloid leukemia (AML). It plays a key role in tumor initiation, proliferation and progression.