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Anti-BCMA Antibody-drug Conjugate GSK2857916

National Cancer Institute

Source

National Cancer Institute. *Anti-BCMA Antibody-drug Conjugate GSK2857916*. NCI Thesaurus. Code C114299.

An antibody-drug conjugate (ADC) consisting of an afucosylated, humanized monoclonal antibody, directed against the B-cell maturation antigen (BCMA), conjugated to the auristatin analogue and microtubule inhibitor monomethyl auristatin phenylalanine (MMAF), with potential antineoplastic activity. The anti-BCMA antibody moiety of anti-BCMA ADC GSK2857916 selectively binds to the BCMA on tumor cell surfaces. Upon internalization, the MMAF moiety binds to tubulin and inhibits its polymerization, which results in G2/M phase arrest and induces tumor cell apoptosis. In addition, GSK2857916 induces antibody-dependent cellular cytotoxicity (ADCC). Altogether, this results in the inhibition of cellular proliferation in tumor cells that overexpress BCMA. BCMA, a receptor for a proliferation-inducing ligand and B-cell activating factor, is a member of the tumor necrosis factor (TNF) receptor superfamily and plays a key role in plasma survival; it is found on the surfaces of plasma cells and overexpressed on malignant plasma cells. Afucosylation of the antibody moiety increases ADCC.