Anti-CD70 Antibody-Drug Conjugate MDX-1203

National Cancer Institute

Source

National Cancer Institute. Anti-CD70 Antibody-Drug Conjugate MDX-1203. NCI Thesaurus. Code C84855.

An antibody-drug conjugate (ADC) containing a fully human monoclonal antibody, directed against the extracellular domain of the human CD70 molecule, conjugated to a prodrug of a CC-1065 (rachelmycin) analogue via a stable peptide-based linker, with potential antineoplastic activity. The anti-CD70 antibody moiety of the anti-CD70 antibody-drug conjugate MDX-1203 selectively binds to the extracellular domain of CD70 on tumor cell surfaces. Upon internalization, the prodrug moiety is released and activated and binds to double-stranded B-DNA within the minor groove, thereby alkylating the -3 position of adenine, which may result in the inhibition of cellular proliferation of tumor cells that overexpress CD70. CD70, the ligand for the costimulatory receptor CD27 and a member of the tumor necrosis factor (TNF) family, is found on the surfaces of various types of cancer cells. The antitumor antibiotic CC-1065, a DNA minor-groove-binding alkylating agent, was originally isolated from the bacterium Streptomyces zelensis.