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Anti c-KIT Antibody-drug Conjugate LOP628

National Cancer Institute

Source

National Cancer Institute. *Anti c-KIT Antibody-drug Conjugate LOP628*. NCI Thesaurus. Code C117735.

An antibody-drug conjugate (ADC) consisting of a humanized monoclonal antibody against the stem cell factor receptor c-Kit (SCFR) and conjugated, via a non-cleavable linker, to the cytotoxic agent maytansine, with potential antineoplastic activity. The monoclonal antibody moiety of anti c-KIT ADC LOP628 targets and binds to the cell surface antigen c-Kit. After antibody-antigen interaction followed by internalization, the maytansine moiety binds to tubulin, inhibits microtubule assembly, and induces microtubule disassembly. This leads to a disruption of mitosis and the inhibition of cell proliferation in cancer cells expressing c-Kit. c-Kit, a transmembrane protein and receptor tyrosine kinase, is overexpressed in solid tumors and hematological malignancies; it plays a key role in the regulation of cell differentiation and proliferation.