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Anti-mesothelin/MMAE Antibody-Drug Conjugate DMOT4039A

National Cancer Institute

Source

National Cancer Institute. *Anti-mesothelin/MMAE Antibody-Drug Conjugate DMOT4039A*. NCI Thesaurus. Code C116746.

An antibody-drug conjugate (ADC) composed of MMOT0530A, a humanized immunoglobulin (Ig) G1 monoclonal antibody directed against the cell surface glycoprotein mesothelin (MSLN), and covalently linked, via a protease-cleavable peptide linker, to monomethyl auristatin E (MMAE), an auristatin derivative and a potent microtubule disrupting agent, with potential antineoplastic activity. Upon administration, the monoclonal antibody moiety of DMOT 4039A binds to MSLN-expressing tumor cells and is internalized, thereby delivering MMAE intracellularly. Proteolytic cleavage releases MMAE, which then binds to tubulin and inhibits its polymerization, resulting in G2/M phase arrest and tumor cell apoptosis. MSLN, a tumor-associated antigen (TAA), is overexpressed by all mesotheliomas and a variety of other cancers, while it is minimally expressed in normal tissue.