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## MD1

产品编号: D10766

CAS: 139504-50-0

保存条件: Store at -20°C stable for 3 years.

产品介绍: Mertansine, also called DM1 (and in some of its forms emtansine), is a thiol-containing maytansinoid that for therapeutic purposes is attached to a monoclonal antibody through reaction of the thiol group with a linker structure to create an antibody-drug conjugate (ADC). Mertansine is a tubulin inhibitor, meaning that it inhibits the assembly of microtubules by binding to tubulin (at the rhizoxin binding site). The monoclonal antibody binds specifically to a structure (usually a protein) occurring in a tumour, thus directing mertansine into this tumour. This concept is called targeted therapy. Trastuzumab emtansine also known as ado-trastuzumab emtansine and sold under the trade name Kadcyla, is an antibody-drug conjugate consisting of the humanized monoclonal antibody trastuzumab (Herceptin) covalently linked to the cytotoxic agent DM1. Trastuzumab alone stops growth of cancer cells by binding to the HER2 receptor, whereas trastuzumab emtansine undergoes receptor-mediated internalization into cells, is catabolized in lysosomes where DM1-containing catabolites are released and subsequently bind tubulin to cause mitotic arrest and cell death. Trastuzumab binding to HER2 prevents homodimerization or heterodimerization (HER2/HER3) of the receptor, ultimately inhibiting the activation of MAPK and PI3K/AKT cellular signalling pathways. Because the monoclonal antibody targets HER2, and HER2 is only over-expressed in cancer cells, the conjugate delivers the cytotoxic agent DM1 specifically to tumor cells.