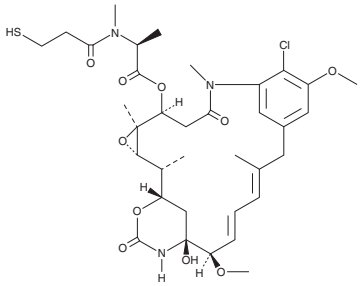
PRODUCT INFORMATION

Mertansine

Item No. 22483

CAS Registry No.:	139504-50-0
Formal Name:	$N^{2'}$-deacetyl-$N^{2'}$-(3-mercapto-1-oxopropyl)-maytansine
Synonym:	DM 1 Compound
MF:	$C_{35}H_{48}ClN_3O_{10}S$
FW:	738.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 233, 253 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Mertansine is supplied as a crystalline solid. A stock solution may be made by dissolving the mertansine in the solvent of choice. Mertansine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of mertansine in these solvents is approximately 0.25, 20, and 33 mg/ml, respectively.

Mertansine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, mertansine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Mertansine has a solubility of approximately 0.03 mg/ml in a 1:30 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Mertansine is a thiol-containing derivative of maytansine that is cytotoxic to human epidermoid carcinoma KB and human breast cancer SK-BR-3 cells (IC_{50} = 1.10 nM for both).[1] Formulations containing mertansine have been studied for the treatment of multiple myeloma and squamous cell carcinoma.[2,3]

References

1. Widdison, W.C., Wilhelm, S.D., Cavanagh, E.E., *et al.* Semisynthetic maytansine analogues for the targeted treatment of cancer. *J. Med Chem.* **49(14)**, 4392-4408 (2006).
2. Berdeja, J.G. Lorvotuzumab mertansine: Antibody-drug-conjugate for $CD56^+$ multiple myeloma. *Front. Biosci.* **19**, 163-170 (2014).
3. Tijink, B.M., Buter, J., de Bree, R., *et al.* A phase I dose escalation study with anti-CD44v6 bivatuzumab mertansine in patients with incurable squamous cell carcinoma of the head and neck or esophagus. *Clin. Cancer Res.* **12(20 Pt 1)**, 6064-6072 (2006).

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