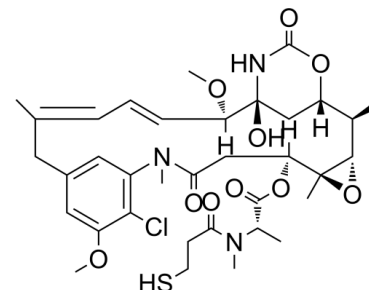


## Data Sheet

<b>Product Name:</b>	Mertansine
<b>Cat. No.:</b>	CS-5804
<b>CAS No.:</b>	139504-50-0
<b>Molecular Formula:</b>	C <sub>35</sub> H <sub>48</sub> ClN <sub>3</sub> O <sub>10</sub> S
<b>Molecular Weight:</b>	738.29
<b>Target:</b>	ADC Cytotoxin; Microtubule/Tubulin
<b>Pathway:</b>	Antibody-drug Conjugate/ADC Related; Cell Cycle/DNA Damage; Cytoskeleton
<b>Solubility:</b>	DMSO : 62.5 mg/mL (ultrasonic)



### BIOLOGICAL ACTIVITY:

Mertansine (DM1) is a **microtubulin** inhibitor and is an antibody-conjugatable maytansinoid that is developed to overcome systemic toxicity associated with maytansine and to enhance tumor-specific delivery. Mertansine can be attached to a monoclonal antibody with a linker to create an antibody-drug conjugate (ADC)<sup>[1][2]</sup>. *In Vitro*: Mertansine is a strong antiproliferative chemotherapeutics toward over 60 types of cancer cell lines<sup>[3]</sup>.

Mertansine (0-1 µg/mL) shows antitumor activity in malignant B16F10 melanoma cells, and inhibits tumor cell growth by inhibiting mitosis when combined with DTX<sup>[3]</sup>. *In Vivo*: Mertansine (DM1) has a low maximum-tolerated dose (MTD) of 1 mg/kg<sup>[3]</sup>

### References:

- [1]. Manu Lopus et al. Maytansine and Cellular Metabolites of Antibody-Maytansinoid Conjugates Strongly Suppress Microtubule Dynamics by Binding to Microtubules.
- [2]. Lopus M. Antibody-DM1 conjugates as cancer therapeutics. Cancer Lett. 2011 Aug 28;307(2):113-8.
- [3]. Zhong P, et al. cRGD-installed docetaxel-loaded mertansine prodrug micelles: redox-triggered ratiometric dual drug release and targeted synergistic treatment of B16F10 melanoma. Nanotechnology. 2017 Jul 21;28(29):295103.

### CAIndexNames:

Maytansine, N2'-deacetyl-N2'-(3-mercapto-1-oxopropyl)-

### SMILES:

```
C[C@]1([C@@](CC(N(C(C=C2C=C3OC)=C3Cl)C)=O)([H])OC([C@H](C)N(C)C(CCS)=O)=O)[C@H]([C@@H]([C@](OC4=O)([H])C[C@]([C@]/C=C/C=C(C)/C2)([H])OC)(N4)O)C)O1
```

**Caution: Product has not been fully validated for medical applications. For research use only.**

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