

CellMosaic, Inc.

10A Roessler Road Woburn, MA 01801, USA

Phone: 781-463-0002; Fax: 781-998-4694; E-mail: info@cellmosaic.com

### S-Methyl DM4 (S-Methyl Ravtansine) Standard

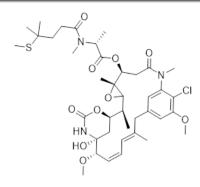
10 mM DMSO Solution, ≥99% pure by HPLC

Product Number: CM11015

CAS Registration Number: 890654-03-2

MW: 794.40 Da

Chemical Formula: C39H56ClN3O10S



## **Product Description**

S-methyl DM4 is the primary cellular or liver metabolite of ADC or other conjugates prepared with DM4. DM4 (ravtansine) is a semisynthetic analogue of maytansine with a C3 ester side chain bearing a dimethyl hindered thiol substituent. It binds to tubulin and inhibits the assembly of microtubules. DM4 is used to prepare antibody-drug conjugates. DM4 is not very stable in aqueous solution and can be oxidized or dimerized. CellMosaic's S-methyl DM4 is a high purity product that can serve as a standard for HPLC and LC-MS/MS analysis. The product is formulated in DMSO solution, quantified by UV/HPLC using DM1 as standard/calibrator at 252 nm, and ready to use after dilution. Although S-methyl DM4 inhibits polymerization weaker than DM4, it can also be used as a stable control for the ADC studies instead of DM4.

# **Application**

- As a standard for HPLC and LC-MS/MS analysis of the metabolite.
- As a control for ADC studies.

#### **Key Features**

- Formulated as 10 mM solution in DMSO and ready to use after dilution.
- Concentration is determined by UV/HPLC using DM1 as standard/calibrator at 252 nm.

#### References

- 1) Erickson, H. K. et. al. (2010) Tumor Delivery and In Vivo Processing of Disulfide-Linked and Thioether-Linked Antibody-Maytansinoid Conjugates. *Bioconjugate Chem.* 21, 84-92.
- 2) Widdison, W. *et al.* (**2015**) Metabolites of Antibody–Maytansinoid Conjugates: Characteristics and in Vitro Potencies. *Mol. Pharmacuetics*, **12**, 1762-1773.
- 3) Lopus M. *et al.* (**2010**). Maytansine and Cellular Metabolites of Antibody-Maytansinoid Conjugates Strongly Suppress Microtubule Dynamics by Binding to Microtubules. Mol. Cancer. Ther. 9(1), 2689-2699.
- 4) Fu. Y. et al. (2022). Sensitive LC-MS/MS quantification of unconjugated maytansinoid DM4 and its metabolite S-methyl-DM4 in human plasma. *Bioanalysis*. 14(6), 357-368.