

S-Methyl DM4 (S-Methyl Ravtansine) Standard

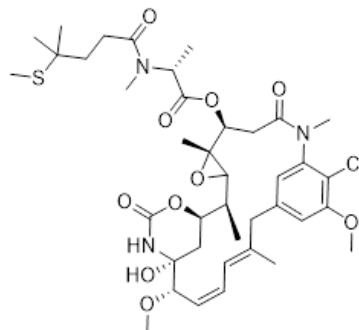
10 mM DMSO Solution, ≥99% pure by HPLC

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.