

PRODUCT INFORMATION



DM4 (hydrate)

Item No. 34121

Formal Name: N^{2'}-deacetyl-N^{2'}-(4-mercapto-4-methyl-1-oxopentyl)-maytansine, hydrate

Synonym: Maytansinoid DM 4

MF: C₃₈H₅₄ClN₃O₁₀S • XH₂O

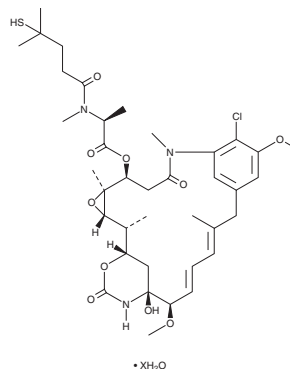
FW: 780.4

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

DM4 (hydrate) is supplied as a solid. A stock solution may be made by dissolving the DM4 (hydrate) in the solvent of choice, which should be purged with an inert gas. DM4 (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DM4 (hydrate) in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

DM4 is a thiol-containing derivative of the tubulin polymerization inhibitor maytansine.^{1,2} It is cytotoxic to SK-BR-3 cells (IC₅₀ = 3.3 nM).¹ DM4, conjugated to a humanized CD205-targeting monoclonal antibody, is selectively cytotoxic to a variety of CD205-expressing human cancer cells (EC₅₀s = 0.1-1.32 nM) over non-CD205-expressing cells (EC₅₀s = 14.2-22.66 nM) and reduces tumor growth in various mouse xenograft and patient-derived (PDX) cancer models.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. Remillard, S., Rebhun, L.I., Howie, G.A., *et al.* Antimitotic activity of the potent tumor inhibitor maytansine. *Science* **189(4207)**, 1002-1005 (1975).
3. Merlino, G., Fiascarelli, A., Bigioni, M., *et al.* MEN1309/OBT076, a first-in-class antibody-drug conjugate targeting CD205 in solid tumors. *Mol. Cancer Ther.* **18(9)**, 1533-1543 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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