MMAD-d_8

Cat. No.: HY-15581S

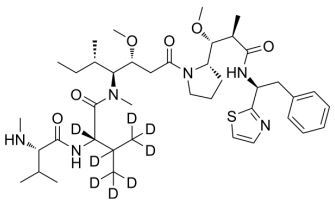
Molecular Formula: $C_{41}H_{58}D_8N_6O_6S$

Molecular Weight: 779.11

Target: ADC Cytotoxin; Microtubule/Tubulin

Pathway: Antibody-drug Conjugate/ADC Related; Cell Cycle/DNA Damage; Cytoskeleton

Storage: Powder -20°C 3 years
4°C 2 years
* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (128.35 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.2835 mL	6.4176 mL	12.8352 mL
5 mM	0.2567 mL	1.2835 mL	2.5670 mL
10 mM	0.1284 mL	0.6418 mL	1.2835 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

MMAD-d_8D is a deuterated form of MMAD, which is a microtubule disrupting agent.

IC_{50} & Target

Auristatin

In Vitro

MMAD (Monomethyl Dolastatin 10) is coupled through a stable oxime-ligation process to yield several near-homogenous antibody-drug conjugates (ADCs) with a drug-to-antibody ratio of ~2.0. The resulting conjugates demonstrate good pharmacokinetic properties, potent in vitro cytotoxic activity against HER2+ cancer cells. When compared with ADCs prepared by cysteine alkylation following native interchain disulfide reduction, site-specific unnatural-amino-acid-based ADCs are shown to have increased in vitro cytotoxicity[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The resulting antibody-drug conjugates (ADCs) demonstrate complete tumour regression in rodents. They also have an improved toxicology profile in rats[1].
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REFERENCES

[1]. Chudasama V, et al. Recent advances in the construction of antibody-drug conjugates. Nat Chem. 2016 Feb;8(2):114-9.

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