Product Data Sheet

Product Name: D8-MMAF hydrochloride
Cat. No.: GC35799

Chemical Properties

Cas. No.			
SMILES	CC[C@H](C)[C@@H]([C@@H](CC(N1[C@@H](CCC1)[C@@H]([C@@H](C)C(N[C@H](C(O)=O)CC2=CC=CC=C2)=O)OC)=O)OC)N(C([C@@](C([2H])(C([2H])([2H])[2H])C([2H])([2H])[2H])([2H])NC([C@H](C(C)C)NC)=O)=O)C.Cl		
Formula	$C_{39}H_{58}D_8ClN_5O_8$	M.Wt	776.47
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	D8-MMAF hydrochloride		

Background

D8-MMAF hydrochloride is a deuterated form of MMAF hydrochloride, which is a microtubule disrupting agent. IC50: 119 nM (Cytotoxicity, Karpas 299 cell), 105 nM (Cytotoxicity, H3396 cell), 257 nM (Cytotoxicity, 786-O cell), 200 nM (Cytotoxicity, Caki-1, cell)[1]

MMAF shows in vitro cytotoxicity against a panel of cell lines. The IC50 values for Karpas 299, H3396, 786-O and Caki-1 are 119, 105, 257, and 200 nM, respectively. Targeted MMAF is much more potent than the free drug, and that cAC10 conjugates of MMAF display pronounced activities. On a molar basis, the cAC10-L1-MMAF4 is an average of over 2200-fold more potent than free MMAF and is active on all the CD30-positive cell lines tested[1].

The maximum tolerated dose in mice of MMAF (>16 mg/kg) is much higher than MMAE (1 mg/kg). cAC10-L1-MMAF4 has an MTD of 50 mg/kg in mice and 15 mg/kg in rats. The corresponding cAC10-L4-MMAF4 ADC was much less toxic, having MTDs in mice and rats

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

of >150 mg/ kg and 90 mg/kg in rats, respectively[1].

[1]. Doronina SO, et al. Enhanced activity of monomethylauristatin F through monoclonal antibody delivery: effects of linker technology on efficacy and toxicity. Bioconjug Chem. 2006 Jan-Feb;17(1):114-24.

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