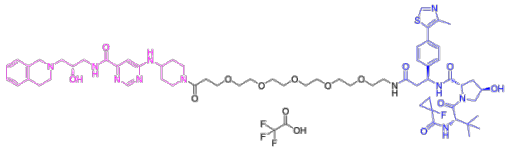
Product Data Sheet

Product Name: MS115 TFA
Cat. No.: GC80939

Chemical Properties

Cas. No.	3109377-61-6		
Formula	$C_{65}H_{89}F_4N_{11}O_{15}S$	M.Wt	1372.53
Solubility	DMSO: 100 mg/mL (72.86 mM; Need ultrasonic)	Storage	Store at -20°C, sealed storage, away from moisture and light
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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			



Background

MS115 TFA is a selective PRMT5/MEP50 PROTAC degrader, with DC_{50} values of 17.4 nM and 11.3 nM for PRMT5 and MEP50, respectively. MS115 TFA promotes PRMT5/MEP50 ubiquitination and degradation. MS115 TFA shows anticancer activity against breast cancer [1]. (Pink: PRMT5 and MEP50 ligand; Blue: VHL ligand; Black: linker).

In Vivo, MS115 (TFA) (50 mg/kg; i.p.; single dose) exhibits favorable mouse pharmacokinetic properties with rapid absorption and sustained plasma exposure following a single 50 mg/kg

intraperitoneal injection[1].

In Vitro, MS115 (2.1 μM; 120 min) TFA inhibits PRMT5 methyltransferase activity in a cell-free assay with an IC_{50} of 2.1 μM[1]. MS115 (0.01-5 μM; 3-72 h) TFA potently and selectively degrades PRMT5 (DC_{50}: 17.4 nM) and MEP50 (DC_{50}: 11.3 nM) in MDAMB468 cells in concentration- and time-dependent manners, achieving >85% maximum degradation of both proteins[1]. MS115 (0.5-5 μM; 24-72 h, with 1-2 h pretreatment for mechanism assays) TFA mediates PRMT5/MEP50 degradation in MDAMB468 cells that requires binding to both PRMT5 and VHL, and proceeds via the ubiquitin-proteasome system[1]. MS115 (serial dilutions; 7 days) TFA inhibits MDAMB468 cell proliferation with a gIC50 of 5.6 μM[1]. MS115 (serial dilutions; 5 days) TFA inhibits proliferation of MDAMB453, MDAMB231, and MCF7 breast cancer cells, with potency comparable to the PRMT5 inhibitor GSKi[1]. MS115 (0.004-5 μM; 7 h-3 days) TFA potently degrades PRMT5/MEP50 in PC-3 prostate cancer cells, showing greater efficacy than the PRMT5 degrader MS4322[1]. MS115 (0.5-5 μM; 3 days) TFA degrades PRMT5/MEP50 in MCF10A normal breast epithelial cells and PNT2 normal prostate epithelial cells[1]. MS115 (serial dilutions; 5-6 days) TFA degrades PRMT5/MEP50 in normal epithelial cell lines (MCF10A, PNT2) without significant cytotoxicity[1].

References:
[1]. Zhong Y, et al. Discovery of a Potent and Selective Protein Arginine Methyltransferase 5 (PRMT5) PROTAC Degrader. J Med Chem. 2025;68(8):8543-8563.