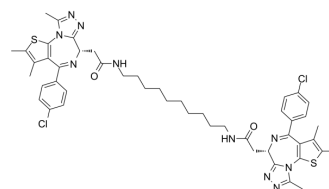


MS645

Cat. No.:	HY-125232
CAS No.:	2250091-96-2
Molecular Formula:	C ₄₈ H ₅₄ Cl ₂ N ₁₀ O ₂ S ₂
Molecular Weight:	938.04
Target:	Epigenetic Reader Domain
Pathway:	Epigenetics
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 200 mg/mL (213.21 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	1.0661 mL	5.3303 mL	10.6605 mL
				5 mM	0.2132 mL	1.0661 mL	2.1321 mL
				10 mM	0.1066 mL	0.5330 mL	1.0661 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 5 mg/mL (5.33 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 5 mg/mL (5.33 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	MS645 is a bivalent BET bromodomains (BrD) inhibitor with a K _i of 18.4 nM for BRD4-BD1/BD2. MS645 spatially constrains bivalent inhibition of BRD4 BrDs resulting in a sustained repression of BRD4 transcriptional activity in solid-tumor cells ^[1] .
IC ₅₀ & Target	BRD4(BD1BD2) 18.4 nM (K _i)
In Vitro	MS645 has cell growth inhibitory effects on noncancer cell lines of mouse macrophage RAW cells and nontumorigenic breast epithelial MCF10A with IC ₅₀ s of 4.1 nM, 6.8 nM, 7.9 nM for triple-negative breast cancer (TNBC) cell lines HS5878T, BT549, and MCF 10A ^[1] . MS645 (15, 30, 60 nM) results in a dramatic reduction of c-Myc expression and an increase of p21, a tumor suppressor and cell-cycle inhibitor in HCC1806 cells ^[1] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ren C, et al. Spatially constrained tandem bromodomain inhibition bolsters sustained repression of BRD4 transcriptional activity for TNBC cell growth. Proc Natl Acad Sci U S A. 2018 Jul 31;115(31):7949-7954.

Caution: Product has not been fully validated for medical applications. For research use only.

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