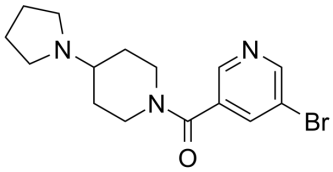
UNC 669

Cat. No.:	HY-15839
CAS No.:	1314241-44-5
Molecular Formula:	$C_{15}H_{20}BrN_3O$
Molecular Weight:	338.24
Target:	Epigenetic Reader Domain
Pathway:	Epigenetics
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (147.82 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9565 mL	14.7824 mL	29.5648 mL
	5 mM	0.5913 mL	2.9565 mL	5.9130 mL
	10 mM	0.2956 mL	1.4782 mL	2.9565 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: ≥ 2.5 mg/mL (7.39 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

UNC 669, a ligand for a methyl-lysine binding domain, is a potent L3MBTL1 (IC_{50}=4.2 uM) and L3MBTL3 (3.1 uM) inhibitor[1].

IC_{50} & Target

IC50: 4.2 uM/3.1 uM (L3MBTL1/L3MBTL3)[1]

In Vitro

L3MBTL1, a paralogue of Drosophila tumor suppressor lethal(3)malignant brain tumor (l(3)mbt), binds histones in a methylation state-dependent manner and contributes to higher order chromatin structure and transcriptional repression. Similar to L3MBTL1, the closely related protein, L3MBTL3, also contains three MBT repeats and has been shown to play a

role in meduloblastoma formation and normal hematopoiesis in humans[1][2].

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

CUSTOMER VALIDATION

- Oncogene. 2021 Apr;40(15):2711-2724.
- Elife. 2020 Dec 7;9:e61405.

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REFERENCES

[1]. James LI, et al. Small-molecule ligands of methyl-lysine binding proteins: optimization of selectivity for L3MBTL3. J Med Chem. 2013 Sep 26;56(18):7358-71.

[2]. Trojer P, et al. L3MBTL1, a histone-methylation-dependent chromatin lock. Cell. 2007;129(5):915-928.

[3]. Baughman BM, et al. The L3MBTL3 Methyl-Lysine Reader Domain Functions As a Dimer [retracted in: ACS Chem Biol. 2018 Jan 19;13(1):281]. ACS Chem Biol. 2016;11(3):722-728.

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