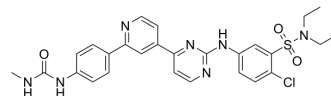


hSMG-1 inhibitor 11j

Cat. No.:	HY-124719
CAS No.:	1402452-15-6
Molecular Formula:	C ₂₇ H ₂₈ ClN ₇ O ₃ S
Molecular Weight:	566
Target:	PI3K; mTOR; GSK-3; CDK
Pathway:	PI3K/Akt/mTOR; Stem Cell/Wnt; Cell Cycle/DNA Damage
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 80 mg/mL (141.34 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		1.7668 mL	8.8339 mL	17.6678 mL
		5 mM		0.3534 mL	1.7668 mL	3.5336 mL
10 mM		0.1767 mL	0.8834 mL	1.7668 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: ≥ 6 mg/mL (10.60 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	hSMG-1 inhibitor 11j, a pyrimidine derivative, is a potent and selective inhibitor of hSMG-1, with an IC ₅₀ of 0.11 nM. hSMG-1 inhibitor 11j exhibits >455-fold selectivity for hSMG-1 over mTOR (IC ₅₀ =50 nM), PI3Kα/γ (IC ₅₀ =92/60 nM) and CDK1/CDK2 (IC ₅₀ =32/7.1 μM). hSMG-1 inhibitor 11j can be used for the research of cancer ^[1] .			
IC₅₀ & Target	hSMG-1 0.11 nM (IC ₅₀)	mTOR 50 nM (IC ₅₀)	PI3Kγ 60 nM (IC ₅₀)	PI3Kα 92 nM (IC ₅₀)
	GSKα 260 (IC ₅₀)	GSKβ 330 (IC ₅₀)	CDK2 7.1 μM (IC ₅₀)	CDK1 32 μM (IC ₅₀)
In Vitro	hSMG-1 inhibitor 11j (0.3-3 μM; 6 h) significantly reduces UPF1 phosphorylation at 0.3 μM, and eliminates it at 1 μM in MDA 361 cells ^[1] . hSMG-1 inhibitor 11j inhibits MDA468 cell proliferation, with an IC ₅₀ of 75 nM ^[1] .			

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

CUSTOMER VALIDATION

- Nat Commun. 2023 Aug 8;14(1):4760.

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REFERENCES

[1]. Gopalsamy A, et, al. Identification of pyrimidine derivatives as hSMG-1 inhibitors. Bioorg Med Chem Lett. 2012 Nov 1;22(21):6636-41.

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

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