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Zuschläge

- Mindermengenzuschlag
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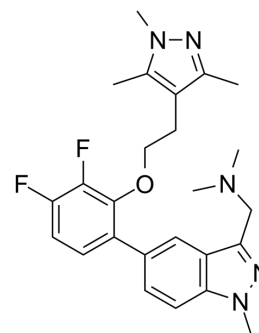
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IMP-1088

Cat. No.:	HY-112258
CAS No.:	2059148-82-0
Molecular Formula:	C ₂₅ H ₂₉ F ₂ N ₅ O
Molecular Weight:	453.53
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (220.49 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration Mass	1 mg	5 mg	10 mg
			1 mM	2.2049 mL	11.0246 mL
		5 mM	0.4410 mL	2.2049 mL	4.4099 mL
		10 mM	0.2205 mL	1.1025 mL	2.2049 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 (5.51 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.51 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.51 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	IMP-1088 is a potent human N-myristoyltransferases NMT1 and NMT2 dual inhibitor with IC ₅₀ s of <1 nM for HsNMT1 and HsNMT2. IMP-1088 has a K _d of <210 pM for HsNMT1. IMP-1088 efficiently blocks rhinovirus replication by blocking rhinovirus virus-encoded protein (VP0) N-myristoylation. IMP-1088 protects host cells from the cytotoxic effects of viral infection ^[1] .
IC ₅₀ & Target	IC ₅₀ : <1 nM (HsNMT1) and <1 nM (HsNMT2) ^[1] K _d : <210 pM (HsNMT1) ^[1]

In Vitro

IMP-1088 (1-1000 nM) prevents virus-induced cytopathic effect (CPE) in a dose-dependent manner with an IC_{50} of 17 nM. IMP-1088 (125 nM) completely suppresses new infectious virus with an IC_{50} of 5.8 nM. IMP-1088 (1-1000 nM) blocks production of infectious virus and inhibits single cycle replication in primary human bronchial epithelial cells (hBEC) infected with rhinovirus RV-A1 (MOI 5) for 7 h. IMP-1088 significantly inhibits production of infectious virus even when added up to 3 hours post-infection^[1].

IMP-1088 (50 nM) significantly less enriches multiple N-myristoylated proteins in enriched samples^[1].

IMP-1088 (500 nM) inhibits production of infectious rhinovirus particles by blocking virus assembly in HeLa cells infected with rhinovirus RV-A16 (MOI 20) for 6 h^[1].

IMP-1088 (0.24 nM-1 μ M; for 24 hours +24 hours washout) has no long-term effect on cell viability and NMT activity fully recovers by 24 h^[1].

IMP-1088 potentially blocks a key step in viral capsid assembly by inhibition of co-translational myristoylation of a specific virus-encoded protein (VP0). IMP-1088 blocks neither production of viral RNA, nor translation of rhinovirus polyprotein^[1].

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

CUSTOMER VALIDATION

- Cell Signal. 2023 Jun 1;110739.
- Norwegian University of Science and Technology. 2023 May.
- bioRxiv. 2023 Mar 3.

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REFERENCES

[1]. Aurélie Mousnier, et al. Fragment-derived Inhibitors of Human N-myristoyltransferase Block Capsid Assembly and Replication of the Common Cold Virus. Nat Chem. 2018 Jun;10(6):599-606.

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

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