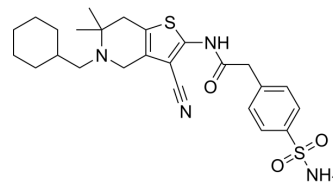


## NITD-688

Cat. No.:	HY-138543		
CAS No.:	2407227-31-8		
Molecular Formula:	C <sub>25</sub> H <sub>32</sub> N <sub>4</sub> O <sub>3</sub> S <sub>2</sub>		
Molecular Weight:	500.68		
Target:	Virus Protease; Flavivirus; Dengue virus		
Pathway:	Anti-infection		
Storage:	Powder	-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 (199.73 mM; ultrasonic and warming and heat to 60°C)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	1.9973 mL	9.9864 mL	19.9728 mL	
5 mM	0.3995 mL	1.9973 mL	3.9946 mL	
10 mM	0.1997 mL	0.9986 mL	1.9973 mL	

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

<b>Description</b>	NITD-688 is an orally active pan-serotype inhibitor of the dengue virus NS4B protein. NITD-688 can be used in the research of dengue virus (DENV) <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	NS4B <sup>[1]</sup>
<b>In Vitro</b>	NITD-688 shows antiviral activity against all four serotypes of dengue virus (DENV), with EC <sub>50</sub> values of 8 to 38 nM <sup>[1]</sup> . NITD-688 shows antiviral activity against DENV-2 infected PBMCs, with an EC <sub>50</sub> value of 0.94 nM <sup>[1]</sup> . NITD-688 directly binds to wild-type but not mutant NS4B protein <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	NITD-688 (30 mg/kg, oral gavage, twice daily for 3 days) demonstrates excellent antiviral efficacy in infected AG129 mice <sup>[1]</sup> . NITD-688 (15-300 mg/kg, oral gavage, per day for 7 days) is well tolerated in rats and dogs (toxicology studies) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Infected AG129 mice <sup>[1]</sup>
Dosage:	30 mg/kg
Administration:	Oral gavage, twice daily for 3 days
Result:	Resulted in a 1.16-log reduction in viremia.

## REFERENCES

[1]. Moquin SA, et al. NITD-688, a pan-serotype inhibitor of the dengue virus NS4B protein, shows favorable pharmacokinetics and efficacy in preclinical animal models. *Sci Transl Med.* 2021 Feb 3;13(579):eabb2181.

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

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