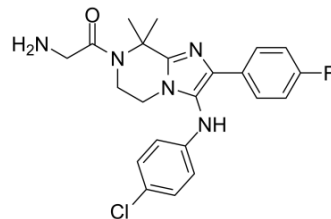


## GNF179

<b>Cat. No.:</b>	HY-15975		
<b>CAS No.:</b>	1261114-01-5		
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>23</sub> ClFN <sub>5</sub> O		
<b>Molecular Weight:</b>	427.9		
<b>Target:</b>	Parasite		
<b>Pathway:</b>	Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 125 mg/mL (292.12 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.3370 mL	11.6850 mL	23.3699 mL
	5 mM	0.4674 mL	2.3370 mL	4.6740 mL
	10 mM	0.2337 mL	1.1685 mL	2.3370 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (4.86 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (4.86 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (4.86 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

GNF179 is an optimized 8,8-dimethyl IP analog that exhibited the potency (4.8 nM against the multidrug resistant strain W2) in vitro metabolic stability and in vivo oral bioavailability. IC<sub>50</sub> value: 4.8 nM [1] Target: Anti-parasitic agent GNF179 exhibits a low clearance (CL=22 ml/min/kg, ~25% of hepatic blood flow in mice), a large volume of distribution (steady-state volume of distribution, V<sub>ss</sub>=11.8 l/kg), a moderate residence time (MRT=9 hours) and suitable terminal half-life (t<sub>1/2</sub>=8.9 hours). GNF179 reduced Plasmodium berghei parasitemia levels by 99.7% with a single 100 mg/kg oral dose, and prolonged mouse survival by an average of 19 days. GNF179 was able to protect against an infectious P. berghei sporozoite challenge with a

---

single oral dose at 15 mg/kg while NITD609 was not.

---

## REFERENCES

---

[1]. Meister S, et al. Imaging of Plasmodium liver stages to drive next-generation antimalarial drug discovery. Science. 2011 Dec 9;334(6061):1372-7.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA