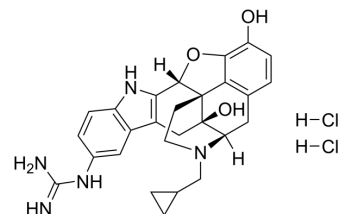


## 5'-Guanidinonaltrindole hydrochloride

Cat. No.:	HY-107748
CAS No.:	351183-88-5
Molecular Formula:	C <sub>27</sub> H <sub>31</sub> Cl <sub>2</sub> N <sub>5</sub> O <sub>3</sub>
Molecular Weight:	544.47
Target:	Opioid Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 125 mg/mL (229.58 mM; ultrasonic and warming and heat to 60°C)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.8366 mL	9.1832 mL	18.3665 mL
	5 mM	0.3673 mL	1.8366 mL	3.6733 mL
	10 mM	0.1837 mL	0.9183 mL	1.8366 mL

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

### BIOLOGICAL ACTIVITY

<b>Description</b>	5'-Guanidinonaltrindole (5'-GNTI) hydrochloride is a highly selective and potent $\kappa$ -opioid receptor antagonist with a K <sub>i</sub> of 0.18 nM for human $\kappa$ -opioid receptor <sup>[1]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	human $\mu$ -opioid receptor 36.9 nM (K <sub>i</sub> )	human $\mu$ -opioid receptor 8.49 (pA <sub>2</sub> )
<b>In Vitro</b>	5'-Guanidinonaltrindole (5'-GNTI) also binds to human $\mu$ - and $\delta$ -opioid receptors with K <sub>i</sub> s of 36.9±2.3 nM and 70.0±0.3 nM, respectively <sup>[1]</sup> . 5'-Guanidinonaltrindole is most effective at $\kappa$ -opioid receptors (pA <sub>2</sub> =10.4±0.10), with substantially lower antagonist potency at $\mu$ -opioid (pA <sub>2</sub> =8.49±0.09) and $\delta$ -opioid receptors (pA <sub>2</sub> =7.81±0.06) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
<b>In Vivo</b>	5'-Guanidinonaltrindole (5'-GNTI) (0.03-3 mg/kg; s.c.; once) induces scratching in mice <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

Animal Model:	Male Swiss-Webster mice <sup>[2]</sup>
Dosage:	0.03, 0.1, 0.3, 1 and 3 mg/kg
Administration:	Subcutaneous injection, once
Result:	Induced scratching, the scratch A <sub>50</sub> value was calculated to be 0.17 mg/kg.

## REFERENCES

[1]. Jones R M, et al. 5'-Guanidinonaltrindole, a highly selective and potent  $\kappa$ -opioid receptor antagonist. European journal of pharmacology, 2000, 396(1): 49-52.

[2]. Cowan A, et al. Itching-like behavior: A common effect of the kappa opioid receptor antagonist 5'-guanidinonaltrindole and the biased kappa opioid receptor agonist 6'-guanidinonaltrindole in mice. Medicine in Drug Discovery, 2021, 11: 100097.

**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

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