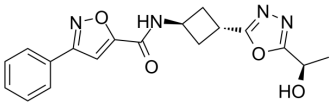
Nesolicaftor

Cat. No.:	HY-111680
CAS No.:	1953130-87-4
Molecular Formula:	$C_{18}H_{18}N_4O_4$
Molecular Weight:	354.36
Target:	CFTR; Autophagy
Pathway:	Membrane Transporter/Ion Channel; Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (705.50 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8220 mL	14.1099 mL	28.2199 mL
5 mM	0.5644 mL	2.8220 mL	5.6440 mL
10 mM	0.2822 mL	1.4110 mL	2.8220 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: ≥ 2.08 mg/mL (5.87 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.87 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nesolicaftor (PTI-428) is a specific cystic fibrosis transmembrane conductance regulator (CFTR) amplifier[1].

IC_{50} & Target

CFTR[1]

In Vitro

Nesolicaftor (PTI-428) (30 μM, 24 h) can increase CFTR function, such as causing a larger change in inh-172 in 16HBE14o-cells expressing G542X-CFTR, also can increase in F508del-CFTR function of CFBE41o-cells expressing F508del-CFTR in a dose-dependent manner[2].

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

CUSTOMER VALIDATION

- Int J Mol Sci. 2022 Sep 19;23(18):10956.
- J Cyst Fibros. 2020 Jul 14;S1569-1993(20)30795-5.

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REFERENCES

[1]. Arianna Venturini, et al. Comprehensive Analysis of Combinatorial Pharmacological Treatments to Correct Nonsense Mutations in the CFTR Gene. Int J Mol Sci. 2021 Nov 4;22(21):11972.

[2]. Mijnders M, et al. Correcting CFTR folding defects by small-molecule correctors to cure cystic fibrosis. Curr Opin Pharmacol. 2017 Jun;34:83-90.

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