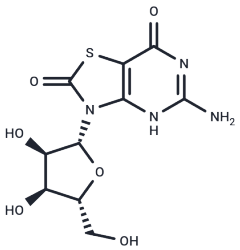
Data Sheet (Cat.No.T24178)

TargetMol

Isatoribine

Chemical Properties



CAS No. : 122970-40-5

Formula: C10H12N4O6S

Molecular Weight: 316.29

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Isatoribine(ANA245) free base is a potent TLR7 receptor agonist with anti-hepatitis C virus infection activity for the study of HCV infection.
Targets(IC50)	HCV Protease,TLR
In vivo	Isatoribine is a selective agonist of TLR7. In a proof-of-concept study, we found that once-daily 7-day treatment with intravenous Isatoribine 800 mg caused a significant (P = .001) reduction of plasma HCV RNA (mean, -0.76; range, -2.85 to +0.21 log(10) units) in otherwise untreated patients (n = 12) who were chronically infected with HCV. Viral load reduction occurred in patients infected with genotype 1 as well as non-genotype 1 HCV. The reduction of viral load was correlated with the induction of markers of a heightened immune antiviral state, including 2'-, 5'- oligoadenylate synthetase levels in whole blood. This treatment was well tolerated, with a low frequency of mild to moderate adverse events. In conclusion, systemic administration of the selective TLR7 agonist Isatoribine resulted in dose-dependent changes in immunologic biomarkers and a statistically significant antiviral effect with relatively few and mild side effects.[1]

Solubility Information

Solubility	DMSO: 45 mg/mL (142.27 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1617 mL	15.8083 mL	31.6166 mL
5 mM	0.6323 mL	3.1617 mL	6.3233 mL
10 mM	0.3162 mL	1.5808 mL	3.1617 mL
50 mM	0.0632 mL	0.3162 mL	0.6323 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Horsmans Y, et al. Isatoribine, an agonist of TLR7, reduces plasma virus concentration in chronic hepatitis C infection. Hepatology. 2005 Sep;42(3):724-31.
Xiang AX, et al. Discovery of ANA975: an oral prodrug of the TLR-7 agonist isatoribine. Nucleosides Nucleotides Nucleic Acids. 2007;26(6-7):635-40.
Kaushik D, et al. Structural evolution of toll-like receptor 7/8 agonists from imidazoquinolines to imidazoles. RSC Med Chem. 2021 May 14;12(7):1065-1120.
Bayes M, et al. Gateways to clinical trials. Methods Find Exp Clin Pharmacol. 2005 Nov;27(9):665-77.