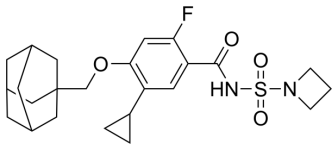
GDC-0276

Cat. No.:	HY-114237
CAS No.:	1494581-70-2
Molecular Formula:	$C_{24}H_{31}FN_2O_4S$
Molecular Weight:	462.58
Target:	Sodium Channel
Pathway:	Membrane Transporter/Ion Channel
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 : 125 mg/mL (270.22 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1618 mL	10.8089 mL	21.6179 mL
	5 mM	0.4324 mL	2.1618 mL	4.3236 mL
	10 mM	0.2162 mL	1.0809 mL	2.1618 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 6.25 mg/mL (13.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GDC-0276 is a potent, selective, reversible and orally active NaV1.7 inhibitor with an IC_{50} value of 0.4 nM. GDC-0276 is well tolerated and exhibits a good pharmacokinetic profile. GDC-0276 has the potential for the treatment of pain and to address shortcomings of existing pain medications, such as addiction and off-target side effects[1].

IC_{50} & Target

Nav1.7

In Vivo

GDC-0276 (oral adminstration; 0.5-5 mg/kg) shows enrichment of 14^C with observed specific activities of 22.6 μCi/mg. GDC-0276 is not detected in urine; however, metabolites in urine were enriched in 14^C with observed specific activities of 19.6 μCi/mg[3].

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

Animal Model:	Six drug-naïve beagle dogs Group 1 four dogs (n=2 per sex) and Group 2 2 BDC dogs (n=2 male)[3]
Dosage:	0.5, 1, 2, 3, 4, 5 mg/kg
Administration:	Oral adminstration
Result:	Showed mean specific activities of 12.2 μCi/mg (a 24% enrichment) (n=4 animals) and 23.5 μCi/mg (a 139% enrichment) (n=2 animals) for Groups 1 and 2, respectively.

REFERENCES

[1]. Rothenberg ME, et al. Safety, Tolerability, and Pharmacokinetics of GDC-0276, a Novel NaV1.7 Inhibitor, in a First-in-Human, Single- and Multiple-Dose Study i

[2]. Steven J. McKerrall, et al. Nav1.7 inhibitors for the treatment of chronic pain. Bioorganic & Medicinal Chemistry Letters (2018)

[3]. Takahashi RH,et al.Unequal Absorption of Radiolabeled and Nonradiolabeled Drug from the Oral Dose Leads to Incorrect Estimates of Drug Absorption and Circulating Metabolites in a Mass Balance Study.Drug Metab Lett. 2019;13(1):37-44.

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