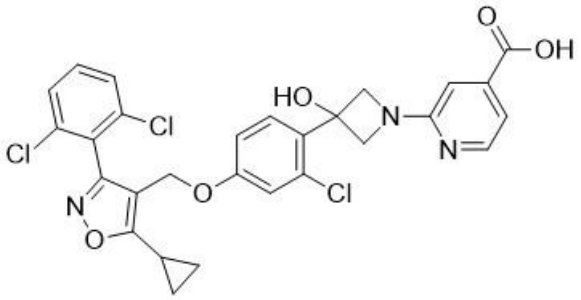
Product data sheet

MedKoo Cat#: 561844 Name: Cilofexor CAS#: 1418274-28-8 (free acid) Chemical Formula: $C_{28}H_{22}Cl_3N_3O_5$ Exact Mass: 585.0625 Molecular Weight: 586.85	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.



1. Product description:
Cilofexor, also known as GS-9674, is a farnesoid X receptor (FXR) agonist. The nonsteroidal FXR agonist cilofexor (GS-9674) improves markers of cholestasis and liver injury in patients with PSC. In clinical study, cilofexor was well tolerated and led to significant improvements in liver biochemistries and markers of cholestasis in patients with PSC.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	32.5	55.38

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	1.70 mL	8.52 mL	17.04 mL
5 mM	0.34 mL	1.70 mL	3.41 mL
10 mM	0.17 mL	0.85 mL	1.70 mL
50 mM	0.03 mL	0.17 mL	0.34 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

TBD

In vivo study

1. Schwabl P, Hambruch E, Budas GR, Supper P, Burnet M, Liles JT, Birkel M, Brusilovskaya K, Königshofer P, Peck-Radosavljevic M, Watkins WJ, Trauner M, Breckenridge DG, Kremoser C, Reiberger T. The Non-Steroidal FXR Agonist Cilofexor Improves Portal Hypertension and Reduces Hepatic Fibrosis in a Rat NASH Model. Biomedicines. 2021 Jan 9;9(1):60. doi: 10.3390/biomedicines9010060. PMID: 33435509; PMCID: PMC7827357.

7. Bioactivity
Biological target:

Cilofexor (GS-9674) is a potent and selectivenonsteroidal FXR agonist with an EC50 of 43 nM.

In vitro activity

TBD

Product data sheet

In vivo activity

This experiment studied the effects of the non-steroidal FXR agonist cilofexor (formerly GS-9674) on portal pressure and fibrosis in experimental NASH. NASH was induced in Wistar rats using a choline-deficient high-fat diet plus intraperitoneal sodium nitrite injections. First, a dose-finding study was performed with 10 mg/kg and 30 mg/kg of cilofexor, focusing on histological readouts. In a subsequent hemodynamic study, rats received 30 mg/kg cilofexor with or without propranolol (25 mg/kg). Portal pressure, systemic hemodynamics and splanchnic blood flow were measured. Cilofexor dose-dependently induced FXR target genes shp, cyp7a1 and fgf15 in hepatic and ileal tissues, paralleled by a dose-dependent reduction in liver fibrosis area (Picro-Sirius-Red) of -41% (10 mg/kg) and -69% (30 mg/kg), respectively. The 30 mg/kg cilofexor dose significantly reduced hepatic hydroxyproline content (-41%), expression of col1a1 (-37%) and pdgfr-β (-36%), as well as desmin area (-42%) in NASH rats. Importantly, cilofexor decreased portal pressure (11.9 ± 2.1 vs. 8.9 ± 2.2 mmHg; $p = 0.020$) without affecting splanchnic blood-flow or systemic hemodynamics. The addition of propranolol to cilofexor additionally reduced splanchnic inflow (-28%) but also mean arterial pressure (-25%) and heart rate (-37%). In conclusion, the non-steroidal FXR agonist cilofexor decreased portal hypertension and reduced liver fibrosis in NASH rats.

Reference: Biomedicines. 2021 Jan 9;9(1):60. https://pubmed.ncbi.nlm.nih.gov/33435509/