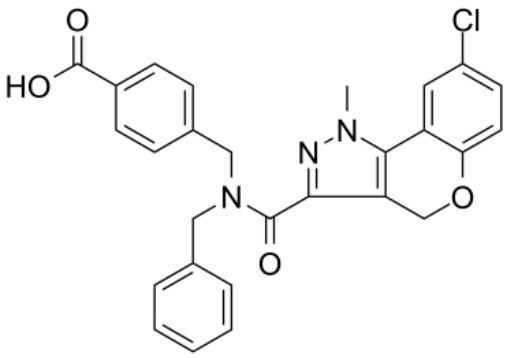
Product Data Sheet

Product Name: Nidufexor
Cat. No.: GC34686

Chemical Properties

Cas. No.	1773489-72-7		
SMILES	CN1C(C2=CC(Cl)=CC=C2OC3)=C3C(C(N(CC4=CC=CC=C4)CC5=CC=C(C(O)=O)C=C5)=O)=N1		
Formula	$C_{27}H_{22}ClN_3O_4$	M.Wt	487.93
Solubility	DMSO : 83.33 mg/mL (170.78 mM);Water : < 0.1 mg/mL (insoluble)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Protocol

Animal experiment [1]:	
Animal models	C57BL/6J mice

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Preparation Method	2-day-old male C57BL/6J mice were injected with streptozotocin (STZ) and placed on a high-fat diet (HFD) from weeks 4 to 12. From weeks 6 to 9, mice received 30mg/kg of Nidufexor or vehicle once a day via oral gavage. The animals were maintained in a specific-pathogen-free facility under controlled conditions of temperature (23°C±2°C), humidity (45%±10%), lighting (12h artificial light and dark cycles; light from 8:00 am to 8:00 pm), and air exchange. Liver tissues were collected for analysis.
Dosage form	30mg/kg/day; 4 weeks; p.o.
Applications	Nidufexor treatment mitigated liver fibrosis and inflammation in mice with HFD.
References:[1] Chianelli D, Rucker P V, Roland J, et al. Nidufexor (LMB763), a novel FXR modulator for the treatment of nonalcoholic steatohepatitis[J]. Journal of medicinal chemistry, 2020, 63(8): 3868-3880.	

Background

Nidufexor is an orally available farnesoid X receptor (FXR) agonist with an EC_{50} value of 25nM[1]. Nidufexor is the effective EphA2 antagonist that prevents EphA2-ephrin-A1 interaction, with an IC_{50} value of 45μM[2]. Nidufexor has been widely used as a lead compound to optimize the structure by supplementing functional groups for the preparation of potent derivatives[3]. Nidufexor has been widely used to inhibit liver fat and improve liver function[4].

In vivo, Nidufexor treatment via oral administration at a dose of 30mg/kg daily for 4 weeks alleviated liver fibrosis in a mouse model of non-alcoholic fatty liver disease (NASH), reduced liver lipid accumulation and steatosis[5].

References:
[1] Shi D Y, Shi X W, Shi H, et al. Discovery of novel potent indazole-based FXR agonists via scaffold hopping for MASH treatment[J]. European Journal of Medicinal Chemistry, 2025: 118203.

Caution: Product has not been fully validated for medical applications. For research use only.
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Product Data Sheet

[2] Ferrari F R, Giorgio C, Zappia A, et al. Pharmacological characterization of second generation FXR agonists as effective EphA2 antagonists: A successful application of target hopping approach[J]. Biochemical Pharmacology, 2023, 209: 115452.
[3] Teno N, Gohda K, Fujimori K. A Review on Farnesoid X Receptor (FXR) Modulators Focusing on Benzimidazole Scaffold[J]. Molecules, 2026, 31(3): 450.
[4] Chen C, Zhou X, Cheng W, et al. Design, synthesis and FXR partial agonistic activity of anthranilic acid derivatives bearing aryloxy moiety as therapeutic agents for metabolic dysfunction-associated steatohepatitis[J]. Bioorganic Chemistry, 2024, 153: 107940.
[5] Chianelli D, Rucker P V, Roland J, et al. Nidufexor (LMB763), a novel FXR modulator for the treatment of nonalcoholic steatohepatitis[J]. Journal of medicinal chemistry, 2020, 63(8): 3868-3880.

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