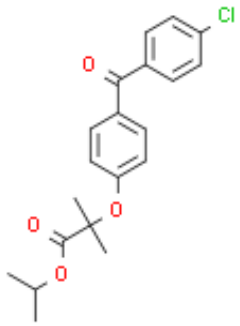
Product Data Sheet

Cas No.:	49562-28-9	Cat. No:	PC12550
Product Name:	Fenofibrate.		
Product synonym:	非诺贝特;2-甲基-2-(4-(4-氯苯甲酰基)苯氧基)丙酸异丙酯;非诺贝特杂质B;苯酰降脂丙酯;立平脂;普鲁脂芬;非诺贝特(标准品);4-甲氧基-3-吡咯啉基-2-酮;Fenofibrate 非诺贝特;奥替拉西钾;非诺贝特 EP标准品;非诺贝特 USP标准品;非诺贝特 标准品;非诺贝特,BP2000;非诺贝特非诺贝特;非诺贝特及其杂质标准品;非诺贝特杂质;菲诺贝特;非诺贝特 苯酰降脂丙酯;非诺贝特,医药级,纯度:>99%		
Chemical name:	Fenofibrate.		
MF:	C20H21CLO4	FW:	360.8313
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	ClC1C([H])=C([H])C(=C([H])C=1[H])C(C1C([H])=C([H])C(=C([H])C=1[H])OC(C(=O)OC([H])(C([H])([H])[H])C([H])([H])[H])(C([H])([H])[H])C([H])([H])[H])=O		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

PPARα激动剂,Fenofibrate是 PPARα 激动剂，EC50 为30 μM。

生物活性	Fenofibrate is a selective **PPARα** agonist with an **EC_{50}** of 30 μM. Fenofibrate also inhibits human cytochrome P450 isoforms, with **IC_{50}**s of 0.2, 0.7, 9.7, 4.8 and 142.1 μM for **CYP2C19**, **CYP2B6**, **CYP2C9**, **CYP2C8**, and **CYP3A4**, respectively.
IC50 & Target[1][2]	CYP2 / CYP3 / CYP2C19: 0.2 μM (IC_{50}) / CYP2B6: 0.7 μM (IC_{50}) / CYP2C9: 9.7 μM (IC_{50}) / CYP2C8: 4.8 μM (IC_{50}) / CYP3A4: 142.1 μM (IC_{50}) / PPARα: 30 μM (IC_{50})

体外研究(In Vitro)	Fenofibrate is a relatively potent inhibitor of CYP2B6 (IC_{50}=0.7±0.2 μM) and CYP2C19 (IC_{50}=0.2±0.1 μM). Fenofibrate is also a moderate inhibitor of CYP2C8 (IC_{50}=4.8±1.7 μM) and CYP2C9 (IC_{50}=9.7 μM). Fenofibrate binds to and inhibits cytochrome P450 epoxygenase (CYP)2C with higher affinity than to PPARα. Fenofibrate is a well-known PPARα agonist, but an 体外研究 assessment of 209 frequently prescribed drugs and related xenobiotics suggests that Fenofibrate is also a potent inhibitor of cytochrome P450 epoxygenase (CYP)2C. The affinity of Fenofibrate to CYP2C is >10 times higher (EC_{50}=2.39±0.4 μM) than to PPARα (EC_{50}=30 μM). Fenofibrate at a low dose inhibits CYP2C8 activity without PPARα activation. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
体内研究(In Vivo)	Daily intake of Fenofibrate at this low dose (10 μg/g/day) inhibits retinal and choroidal neovascularization induced by CYP2C8 overexpression by 29% (P=0.021) and 36% (P=1.2×10) respectively. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
包装储存	Powder **-20°C** 3 years **4°C** 2 years In solvent **-80°C** 6 months **-20°C** 1 month
溶解度数据	*体外研究:* **DMSO : 250 mg/mL** (**692.85 mM;** Need ultrasonic)

配制储备溶液	溶剂体积 / 质量 / 浓度	1 mg	5 mg	10 mg
	1 mM	2.7714 mL	13.8569 mL	27.7139 mL
	5 mM	0.5543 mL	2.7714 mL	5.5428 mL
	10 mM	0.2771 mL	1.3857 mL	2.7714 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，避免反复冻融造成的产品失效**。
  储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

体内研究:

建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，**澄清的储备液可以根据储存条件，适当保存**；体内实验的工作液，**建议您现用现配，当天使用**； 以下溶剂前显示的百分比是指**该溶剂在您配制终溶液中的体积占比**；如在配制过程中出现沉淀、析出现象，可以通过**加热和/或超声的方式助溶**

1. 建议依照次序添加每种溶剂： corn oil
   Solubility: 33.33 mg/mL (92.37 mM); Clear solution; Need ultrasonic

2. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline
   Solubility: ≥ 2.5 mg/mL (6.93 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.93 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入50 μL Tween-80，混合均匀；然后继续加入 450 μL生理盐水定容至 1 mL。

将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液

3. 建议依照次序添加每种溶剂： 10% DMSO 90% (20% SBE-β-CD in saline)

Solubility: 2.5 mg/mL (6.93 mM); Suspended solution; Need ultrasonic

此方案可获得 2.5 mg/mL (6.93 mM) 的均匀悬浊液，悬浊液可用于口服和腹腔注射。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。

将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明

4. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil

Solubility: ≥ 2.5 mg/mL (6.93 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.93 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。

*