

Fenofibrate

Catalog No: tcsc0892



Available Sizes

Size: 5g

Size: 10g



Specifications

CAS No:

49562-28-9

Formula:

$C_{20}H_{21}ClO_4$

Pathway:

Cell Cycle/DNA Damage;Autophagy;Metabolic Enzyme/Protease

Target:

PPAR;Autophagy;Cytochrome P450

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 47 mg/mL (130.26 mM)

Observed Molecular Weight:

360.83

Product Description

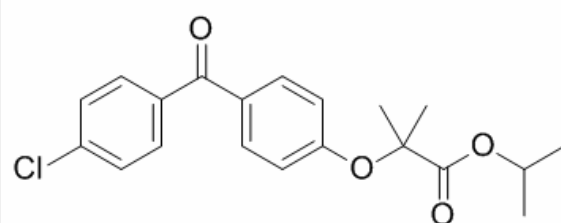
Fenofibrate is a relatively potent inhibitor of **CYP2C19** ($IC_{50}=0.2 \mu M$) and **CYP2B6** ($IC_{50}=0.7 \mu M$). Fenofibrate is also a well-known **PPAR α** agonist ($EC_{50}=30 \mu M$).

IC₅₀ & Target: IC₅₀: 0.2 μM (CYP2C19), 0.7 μM (CYP2B6)^[1]

EC₅₀: 2.39±0.4 μM (CYP2C), 30 μM (PPARα)^[2]

In Vitro: Fenofibrate is a relatively potent inhibitor of CYP2B6 (IC₅₀=0.7±0.2 μM) and CYP2C19 (IC₅₀=0.2±0.1 μM). Fenofibrate is also a moderate inhibitor of CYP2C8 (IC₅₀=4.8±1.7 μM) and CYP2C9 (IC₅₀=9.7 μM)^[1]. 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 in vitro 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 (EC₅₀=2.39±0.4 μM) than to PPARα (EC₅₀=30 μM). Fenofibrate at a low dose inhibits CYP2C8 activity without PPARα activation^[2].

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=1.2×10⁻⁹) respectively^[2].



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