Web: www.taiclone.com
Tel: +886-2-2735-9682
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Gemfibrozil

Catalog No: tcsc2244

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
25812-30-0

Formula:
$C_{15}H_{22}O_3$

Pathway:
Cell Cycle/DNA Damage;Metabolic Enzyme/Protease

Target:
PPAR;Cytochrome P450

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 34 mg/mL (135.82 mM)

Alternative Names:
CI-719

Observed Molecular Weight:
250.33

Product Description

Gemfibrozil is an activator of **PPAR-α**, used as a lipid-lowering drug; Gemfibrozil is also a nonselective inhibitor of several **P450** isoforms, with $\mathbf{K_i}$ values for CYP2C9, 2C19, 2C8, and 1A2 of 5.8, 24, 69, and 82 μM, respectively.

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IC50 & Target: Ki: 5.8 μM (CYP2C9), 24 μM (CYP2C19), 69 μM (CYP2C8), 82 μM (CYP1A2)[3]

PPAR-α[1]

In Vitro: Gemfibrozil is an activator of PPAR-α, used as a lipid-lowering drug[1]; also a nonselective inhibitor of several P450 isoforms, with K_i values for CYP2C9, 2C19, 2C8, and 1A2 of 5.8, 24, 69, and 82 μM, respectively[3]. Gemfibrozil (100, 150, 200 μM) inhibits the cytokine-induced NO production in a concentration dependent manner in human U373MG astroglial cells, and such effects are not due to any change of the stability of iNOS mRNA. Gemfibrozil (50, 100, 200 μM) inhibits human iNOS promoter-derived luciferase activity in cytokine-stimulated human U373MG astroglial cells. Furthermore, Gemfibrozil (50, 100, 150, and 200 μM) shows no effects on the viability of the cells[1]. Gemfibrozil considerably inhibits both M-23 and M-1 formation (catalyzed by CYP2C8 and CYP3A4), with K_i (IC_{50}) values of 69 μM (95 μM) and 273 μM (>250 μM), respectively, in human liver microsomes. Gemfibrozil (0-250 μM) dose dependently inhibits the formation of M-23 (IC_{50}, 68 μM) and M-1 (IC_{50}, 78 μM) in recombinant CYP2C8, but shows no appreciable effect on the formation of these metabolites in recombinant CYP3A4[3].

In Vivo: Gemfibrozil (62 mg/kg/day, p.o.) treatment initiated 3 days before spinal cord injury (SCI) causes decreased locomotor function, and induces a trend for decreased white matter sparing after injury in mice. Gemfibrozil (62 mg/kg/day, p.o.) decreases macrophage immunoreactivity but increases T cell infiltration into spared tissue[2].