Data Sheet (Cat.No.T206549)

TargetMol

PPARα agonist 5

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PPARα agonist5 is an orally active, selective partial agonist of PPARα with an EC50 of 3 nM. It reduces lipid accumulation and upregulates PPARα target genes, exhibiting anti-hepatic steatosis properties. Additionally, PPARα agonist5 demonstrates significant lipid-lowering and glucose-lowering effects through partial PPARγ agonist activity and mild inhibition of protein tyrosine phosphatase 1B (PTP1B) with an IC50 of 79.1 μM. It has favorable safety and is applicable in the study of dyslipidemia in type 2 diabetes.
Targets(IC50)	Phosphatase,PPAR
In vitro	PPARα agonist 5 (Compound (S)-2) selectively activates PPARα in HepG2 cells with an EC50 of 3 nM, displaying approximately 550 times greater activity toward PPARα than PPARγ (EC50: 1.66 μM), and showing no significant activity on PPARδ. At concentrations ranging from 0.025 to 25 μM over 24 hours to 15 days, PPARα agonist 5 significantly reduces oleic acid-induced lipid accumulation in HepaRG cells and upregulates PPARα target genes related to fatty acid oxidation, indicating its potential antifatty liver benefits through activation of lipid metabolism pathways.
In vivo	PPARα agonist 5 (Compound (S)-2), administered orally at doses of 1-7.5 mg/kg for 7 consecutive days, demonstrated significant lipid-lowering and glucose-reducing effects in a Tyloxapol-induced hyperlipidemic and diabetic mouse model. It exhibited no toxicity to the arteries, kidneys, liver, or pancreas and improved tissue damage caused by hyperlipidemia.

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