LT175

Cat. No.: HY-121900

CAS No.: 862901-87-9

Molecular Formula: $C_{21}H_{18}O_3$

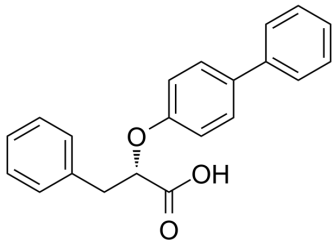
Molecular Weight: 318.37

Target: PPAR

Pathway: Cell Cycle/DNA Damage; Vitamin D Related/Nuclear Receptor

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (314.10 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1410 mL	15.7050 mL	31.4100 mL
	5 mM	0.6282 mL	3.1410 mL	6.2820 mL
	10 mM	0.3141 mL	1.5705 mL	3.1410 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (7.85 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.85 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (7.85 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

LT175, a dual PPARα/γ ligand, is an orally active partial agonist against PPARγ(hPPARα:EC_{50}=0.22 μm; mPPARα:EC_{50}=0.26 μm; hPPARγ:EC_{50}=0.48 μm). LT175 interacts with PPARγ and affects the recruitment of the coregulators cyclic-AMP response element-binding protein-binding protein and nuclear corepressor 1 (NCoR1). LT175 interacts with PPARγ in a hydrophobic region called “diphenyl pocket”. LT175 has potent insulin-sensitizing effects and reduced adipogenic properties[1].

IC_{50} & Target	hPPARα	mPPARα	hPPARγ
	0.22 μM (EC50)	0.26 μM (EC50)	0.48 μM (EC50)

In Vivo	LT175 (100 mg/kg/day; orally; for 3 days) induces a significant decrease in body weight (11%) and reduces fasting blood glucose, triglycerides, and free fatty acids. LT175 decreases total plasma cholesterol significantly in diet-induced Insulin-resistant mice (six-week-old C57Bl/6J male mice)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Federica Gilardi, et al. LT175 is a novel PPARα/γ ligand with potent insulin-sensitizing effects and reduced adipogenic properties. J Biol Chem. 2014 Mar 7;289(10):6908-6920.

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