Product Data Sheet

Product Name: LT175
Cat. No.: GC12760

Chemical Properties

Cas. No.	862901-87-9		
Chemical Name	αS-([1,1'-biphenyl]-4-yloxy)-benzenepropanoic acid		
SMILES	O=C(O)[C@H](CC1=CC=CC=C1)OC(C=C2)=CC=C2C3=CC=CC=C3		
Formula	$C_{21}H_{18}O_3$	M.Wt	318.4
Solubility	≤25mg/ml in ethanol;50mg/ml in DMSO;30mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	LT175		

Background

LT175 is a dual PPARα/γ ligand.

Peroxisome proliferator-activated receptors (PPARs) are ligand-dependent transcription factors regulating lipid and glucose metabolism.

In vitro: LT175 was identified as a partial agonist against PPARγ and interacted with a newly identified region of the PPARγ-ligand binding domain. LT175 could differentially activate PPARγ target genes involved in fatty acid esterification and storage, resulting in a less severe lipid accumulation compared with that triggered by rosiglitazone. Moreover, the peculiar interaction of LT175 with PPARγ could affect the recruitment of the coregulators cyclic-AMP response element-binding protein-binding protein and nuclear corepressor 1 [1].

In vivo: Animal in vivo study showed that the administration of LT175 to mice fed a high-

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fat diet could decrease the adipocyte size, body weight, as well as white adipose tissue mass, as measured by magnetic resonance imaging. In addition, LT175 was able to significantly reduce the insulin, plasma glucose, triglycerides, non-esterified fatty acids, and cholesterol and also could increase the levels of circulating adiponectin and fibroblast growth factor 21. Moreover, the oral glucose and insulin tolerance tests showed that LT175 could improve glucose homeostasis and insulin sensitivity [1].

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Gilardi F 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):6908-20.