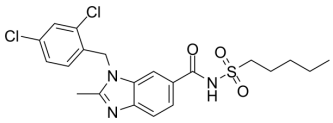
FK614

Cat. No.:	HY-101292
CAS No.:	193012-35-0
Molecular Formula:	$C_{21}H_{23}Cl_2N_3O_3S$
Molecular Weight:	468.4
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 (213.49 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1349 mL	10.6746 mL	21.3493 mL
5 mM	0.4270 mL	2.1349 mL	4.2699 mL
10 mM	0.2135 mL	1.0675 mL	2.1349 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FK614 is an orally active, non-thiazolidinedione (TZD) type, and selective PPARγ modulator (SPPARM). FK614 functions as a PPARγ agonist with potent anti-diabetic activity in vivo. FK614 has different effects on the activation of PPARγ at each stage of adipocyte differentiation. FK614 can be used for the research of hyperglycemia, hypertriglyceridemia, glucose intolerance and type 2 diabetes[1][2].

IC_{50} & Target

PPAR-γ

In Vitro

FK614 (0.1~10000 nM; 24 hours; CV-1 cells) activates PPARγ-dependent transcription in a concentration-dependent manner.
FK614 (0~0.1 μM; 5 days; 3T3-L1 adipocytes) makes triglyceride content increased in a concentration-dependent manner.
FK614 has different effects on the activation of PPARγ at each stage of adipocyte differentiation[1].
FK614 is an insulin sensitizer potentially for treatment of postherpetic neuralgia. FK614 is a non-TZD insulin sensitizer[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

FK614 (0.32~3.2 mg/kg; p.o.; 14 days) dose-dependently reduces plasma glucose level[3].
FK614 (0.1~10 mg/kg; p.o.; 14 days) improves the impaired glucose tolerance[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	db/db Mice
Dosage:	0.1~10 mg/kg
Administration:	P.o.
Result:	Improved the impaired glucose tolerance.

Animal Model:	db/db Mice
Dosage:	0.32~3.2 mg/kg
Administration:	P.o.
Result:	Dose-dependently reduced plasma glucose level.

REFERENCES

[1]. Fujimura T, et al. A selective peroxisome proliferator-activated receptor gamma modulator with distinct fat cell regulation properties. J Pharmacol Exp Ther. 2006;318(2):863-871.

[2]. Fujimura T, et al. FK614, a novel peroxisome proliferator-activated receptor gamma modulator, induces differential transactivation through a unique ligand-specific interaction with transcriptional coactivators. J Pharmacol Sci. 2005;99(4):342-352.

[3]. Minoura H, et al. Ameliorating effect of FK614, a novel nonthiazolidinedione peroxisome proliferator-activated receptor gamma agonist, on insulin resistance in Zucker fatty rat. Eur J Pharmacol. 2005;519(1-2):182-190.

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