MA-0204

Cat. No.: HY-114739

CAS No.: 2095128-17-7

Molecular Formula: $C_{25}H_{27}F_3N_2O_4$

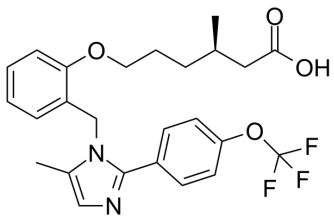
Molecular Weight: 476.49

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	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 43.33 mg/mL (90.94 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0987 mL	10.4934 mL	20.9868 mL
	5 mM	0.4197 mL	2.0987 mL	4.1974 mL
	10 mM	0.2099 mL	1.0493 mL	2.0987 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: 2.17 mg/mL (4.55 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (4.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MA-0204 is a potent, highly selective and orally available peroxisome proliferator activated receptor δ (PPARδ) modulator with EC_{50}s of 0.4 nM, 7.9 nM and 10 nM for human, mouse and rat PPARδ, respectively. Potential treatment for Duchene Muscular Dystrophy (DMD)[1].

IC_{50} & Target			
	PPARδ 0.4 nM (EC50, in human)	PPARδ 7.9 nM (EC50, in mouse)	PPARδ 10 nM (EC50, in rat)

In Vitro

MA-0204 is >10,000-fold selective for activation of PPARδ over PPARα and PPARγ receptors. MA-0204 exhibits high protein binding to mouse plasma, good permeability and low potential for efflux. C[1].

	MA-0204 (1.2-12 nM) improves fatty acid oxidation in DMD patient muscle myoblasts mice[1]. MA-0204 (0.04-40 nM) engages target gene expression in DMD patient muscle myoblasts[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	PPARδ (30, 100 mg/kg) increases target gene transcription in the muscle[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Lagu B, et al. Selective PPARδ Modulators Improve Mitochondrial Function: Potential Treatment for Duchenne Muscular Dystrophy (DMD). ACS Med Chem Lett. 2018 Jul 31;9(9):935-940.

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