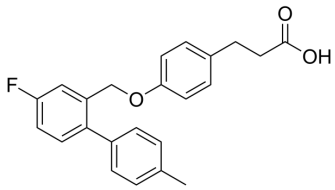
TUG-891

Cat. No.:	HY-100881
CAS No.:	1374516-07-0
Molecular Formula:	$C_{23}H_{21}FO_3$
Molecular Weight:	364.41
Target:	Free Fatty Acid Receptor
Pathway:	GPCR/G Protein
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 : 100 mg/mL (274.42 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7442 mL	13.7208 mL	27.4416 mL
	5 mM	0.5488 mL	2.7442 mL	5.4883 mL
	10 mM	0.2744 mL	1.3721 mL	2.7442 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 (6.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.86 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TUG-891 is a potent and selective agonist for the long chain free fatty acid (LCFA) receptor 4 (FFA4/GPR120)[1].

In Vitro

TUG-891 displays similar signaling properties to the LCFA α-linolenic acid at human FFA4, including stimulation of Ca^{2+} mobilization, β-arrestin-1 and β-arrestin-2 recruitment, and extracellular signal-regulated kinase phosphorylation. Activation of human FFA4 by TUG-891 also results in rapid phosphorylation and internalization of the receptor[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Biol Macromol. 2023 Aug 30;126553.
- Front Immunol. 2021 Jun 10;12:703914.
- Neural Regen Res. 2023 Oct;18(10):2278-2284.
- Biomed Chromatogr. 2020 Sep;34(9):e4870.
- Research Square Print. 2022 May.

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REFERENCES

[1]. Hudson BD, et al. The pharmacology of TUG-891, a potent and selective agonist of the free fatty acid receptor 4 (FFA4/GPR120), demonstrates both potential opportunity and possible challenges to therapeutic agonism. Mol Pharmacol. 2013 Nov;84(5):710-25

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