

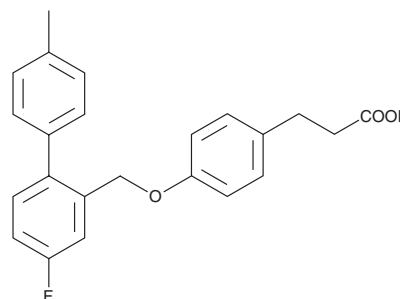
PRODUCT INFORMATION



TUG-891

Item No. 17035

CAS Registry No.: 1374516-07-0
Formal Name: 4-[[4-fluoro-4'-methyl[1,1'-biphenyl]-2-yl)methoxy]-benzenepropanoic acid
MF: C₂₃H₂₁FO₃
FW: 364.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TUG-891 is supplied as a crystalline solid. A stock solution may be made by dissolving the TUG-891 in the solvent of choice, which should be purged with an inert gas. TUG-891 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TUG-891 in ethanol and DMF is approximately 1 mg/ml and approximately 10 mg/ml in DMSO.

TUG-891 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TUG-891 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TUG-891 has a solubility of approximately 0.1 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

TUG-891 is an agonist of free fatty acid receptor 4 (FFAR4/GPR120; EC₅₀s = 0.0436 and 0.0169 μM for the human and mouse receptors, respectively).¹ It is selective for FFAR4 over FFAR1/GPR40 (EC₅₀ = 64.5 μM for the human receptor) and is inactive against FFAR2/GPR43 and FFAR3/GPR41. TUG-891 (1 μM) inhibits lysophosphatidic acid- or EGF-induced proliferation and migration of DU145 and PC3 prostate cancer cells.² It stimulates glucagon-like peptide 1 (GLP-1) release in STC-1 enteroendocrine cells and glucose uptake in 3T3-L1 adipocytes, as well as inhibits LPS-induced TNF-α release in RAW 264.7 macrophages when used at a concentration of 10 μM.³ TUG-891 (20 mg/kg) reduces sleep fragmentation-induced increases in food consumption and epididymal fat mass in mice.⁴

References

1. Shimpukade, B., Hudson, B.D., Hovgaard, C.K., *et al.* Discovery of a potent and selective GPR120 agonist. *J. Med. Chem.* **55**(9), 4511-4515 (2012).
2. Liu, Z., Hopkins, M.M., Zhang, Z., *et al.* Omega-3 fatty acids and other FFA4 agonists inhibit growth factor signaling in human prostate cancer cells. *J. Pharmacol. Exp. Ther.* **352**(2), 380-394 (2015).
3. Hudson, B.D., Shimpukade, B., Mackenzie, A.E., *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.* **84**(5), 710-725 (2013).
4. Gozal, D., Qiao, Z., Almendros, I., *et al.* Treatment with TUG891, a free fatty acid receptor 4 agonist, restores adipose tissue metabolic dysfunction following chronic sleep fragmentation in mice. *Int. J. Obes. (Lond.)* **40**(7), 1143-1149 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/08/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM