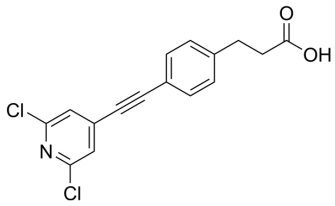
TUG-499

Cat. No.:	HY-148418
CAS No.:	1206629-08-4
Molecular Formula:	$C_{16}H_{11}Cl_2NO_2$
Molecular Weight:	320.17
Target:	Free Fatty Acid Receptor
Pathway:	GPCR/G Protein
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 (312.33 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1233 mL	15.6167 mL	31.2334 mL
	5 mM	0.6247 mL	3.1233 mL	6.2467 mL
	10 mM	0.3123 mL	1.5617 mL	3.1233 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 (7.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TUG-499 is a selective free fatty acid receptor 1 (FFAR1 or GPR40) (Free Fatty Acid Receptor) agonist with a pEC_{50} of 7.39. TUG-499 exhibits >100-fold selectivity over the related receptors FFA2, FFA3, and the nuclear receptor PPARγ and other diverse receptors, ion channels, and transporters. TUG-499 can be used for the research of type 2 diabetes[1]. TUG-499 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

pEC50: 7.39 (FFAR1)[1]

In Vitro

TUG-499 (compound 7) demonstrates high chemical stability, no inhibition of selected CYP enzymes or P-glycoprotein, and excellent Caco-2 permeability. TUG-499 has potent activity on recombinant human FFA1 receptors and on the rat insulinoma cell line INS-1E[1].

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

REFERENCES

[1]. Elisabeth Christiansen, et al. Identification of a potent and selective free fatty acid receptor 1 (FFA1/GPR40) agonist with favorable physicochemical and in vitro ADME properties. J Med Chem. 2011 Oct 13;54(19):6691-703.

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