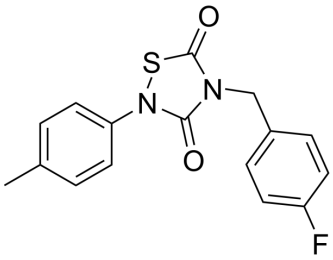
CCG-50014

Cat. No.:	HY-13509
CAS No.:	883050-24-6
Molecular Formula:	$C_{16}H_{13}FN_2O_2S$
Molecular Weight:	316.35
Target:	RGS Protein
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 : 62.5 mg/mL (197.57 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1611 mL	15.8053 mL	31.6106 mL
	5 mM	0.6322 mL	3.1611 mL	6.3221 mL
	10 mM	0.3161 mL	1.5805 mL	3.1611 mL

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

BIOLOGICAL ACTIVITY

Description

CCG-50014 is the most potent against the regulator of G-protein signaling protein type 4 (RGS4) (IC_{50} =30 nM) and is >20-fold selective for RGS4 over other RGS proteins. CCG-50014 binds covalently to the RGS, forming an adduct on two cysteine residues located in an allosteric regulatory site[1]. CCG50014, reduces nociceptive responses and enhances opioid-mediated analgesic effects in the mouse formalin test[2].

IC_{50} & Target				
	RGS4	RGS8	RGS16	RGS19
	30 nM (IC_{50})	11 μM (IC_{50})	3.5 μM (IC_{50})	0.12 μM (IC_{50})

In Vivo

CCG50014 (10, 30, or 100 nM) attenuates the nociceptive responses during the late phase in a dose-dependent manner[2].

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

CUSTOMER VALIDATION

- Neurotherapeutics. 2021 Apr 21.

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REFERENCES

[1]. Blazer LL, et al. A nanomolar-potency small molecule inhibitor of regulator of G-protein signaling proteins. Biochemistry. 2011 Apr 19;50(15):3181-92.

[2]. Yoon SY, et al. Intrathecal RGS4 inhibitor, CCG50014, reduces nociceptive responses and enhances opioid-mediated analgesic effects in the mouse formalin test. Anesth Analg. 2015 Mar;120(3):671-7.

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