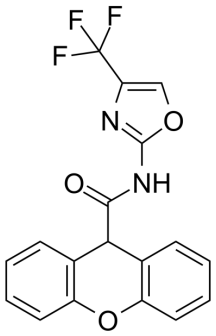
RO0711401

Cat. No.:	HY-124419
CAS No.:	714971-87-6
Molecular Formula:	$C_{18}H_{11}F_3N_2O_3$
Molecular Weight:	360.29
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
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 (277.55 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7755 mL	13.8777 mL	27.7554 mL
	5 mM	0.5551 mL	2.7755 mL	5.5511 mL
	10 mM	0.2776 mL	1.3878 mL	2.7755 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 (6.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RO0711401 is a selective and orally active positive allosteric modulator of mGlu1 receptor with an EC_{50} of 56 nM[1][2].

IC_{50} & Target

mGluR1
56 nM (EC50)

In Vivo

RO0711401 (10 mg/kg; s.c.; once) causes a long-lasting improvement in motor performance, which is maintained to the same extent at least for 6 days[1].
Systemic injection of RO0711401 is shown to reduce the frequency of spike-and-wave discharges in a rat model of absence epilepsy, and to improve motor signs in autoimmune encephalomyelitis (EAE) mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Spinocerebellar ataxia type 1 (SCA1) mice (30-week old)[1]
Dosage:	10 mg/kg
Administration:	Subcutaneous injection; once
Result:	Caused a prolonged improvement of motor performance on the rotarod and the paw-print tests.

REFERENCES

[1]. Serena Notartomaso, et al. Pharmacological enhancement of mGlu1 metabotropic glutamate receptors causes a prolonged symptomatic benefit in a mouse model of spinocerebellar ataxia type 1. Mol Brain. 2013 Nov 19;6:48.

[2]. Eric Vieira, et al. Fluorinated 9H-xanthene-9-carboxylic acid oxazol-2-yl-amides as potent, orally available mGlu1 receptor enhancers. Bioorg Med Chem Lett. 2009 Mar 15;19(6):1666-9.

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