Quisqualic acid

Cat. No.: HY-12597

CAS No.: 52809-07-1

Molecular Formula: $C_5H_7N_3O_5$

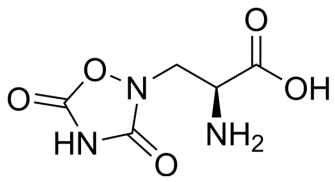
Molecular Weight: 189.13

Target: iGluR; mGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; 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 : 12.5 mg/mL (66.09 mM; ultrasonic and warming and heat to 60°C)

H_2O : 2 mg/mL (10.57 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.2874 mL	26.4368 mL	52.8737 mL
5 mM	1.0575 mL	5.2874 mL	10.5747 mL
10 mM	0.5287 mL	2.6437 mL	5.2874 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 25 mg/mL (132.18 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (6.61 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (6.61 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (6.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Quisqualic acid (L-Quisqualic acid), a natural analog of glutamate, is a potent and pan two subsets (iGluR and mGluR) of excitatory amino acid (EAA) agonist with an EC_{50} of 45 nM and a K_i of 10 nM for mGluR1R. Quisqualic acid is isolated from the fruits of Quisqualis indica[1][2].

IC_{50} & Target	mGluR1R 45 nM (EC50)	mGluR1R 10 nM (Ki)	mGluR2R 108 μM (IC_{50})	mGluR2R 113 μM (Ki)
	mGluR4R 593 μM (IC_{50})	mGluR4R 112 μM (Ki)		
In Vitro	Quisqualic acid is an agonist of AMPA and metabotropic glutamate receptors. Quisqualic acid activates mGluR2R (EC_{50}=108 μM; K_i=113 μM) and mGluR4R (EC_{50}=593 μM; K_i=112 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

REFERENCES

[1]. Hugues-Olivier Bertrand, et al. Common and Selective Molecular Determinants Involved in Metabotopic Glutamate Receptor Agonist Activity. J Med Chem. 2002 Jul 18;45(15):3171-83.

[2]. H Bräuner-Osborne, et al. Ligands for Glutamate Receptors: Design and Therapeutic Prospects. J Med Chem. 2000 Jul 13;43(14):2609-45.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA