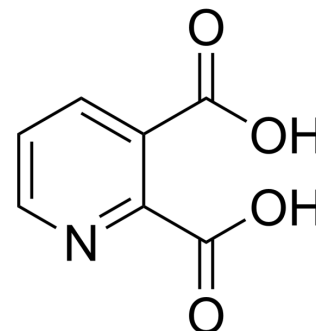


Quinolinic acid

Cat. No.:	HY-100807		
CAS No.:	89-00-9		
Molecular Formula:	C ₇ H ₅ NO ₄		
Molecular Weight:	167.12		
Target:	Endogenous Metabolite; iGluR		
Pathway:	Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; 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 : 33.33 mg/mL (199.44 mM; Need ultrasonic)
 H₂O : 3.33 mg/mL (19.93 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		5.9837 mL	29.9186 mL	59.8372 mL
	5 mM		1.1967 mL	5.9837 mL	11.9674 mL
	10 mM		0.5984 mL	2.9919 mL	5.9837 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 9.09 mg/mL (54.39 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (14.96 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (14.96 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (14.96 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Quinolinic acid is an endogenous N-methyl-D-aspartate (NMDA) receptor agonist synthesized from L-tryptophan via the kynurenine pathway and thereby has the potential of mediating N-methyl-D-aspartate neuronal damage and dysfunction^[1] [2].

IC ₅₀ & Target	Human Endogenous Metabolite	NMDA Receptor	Microbial Metabolite
In Vitro	Quinolinic acid (0-50 mM; 24 hours) decreases the percentage of survival cells ranging from 100±0.01% at 5 mM to 45.23±0.01% at 50 mM in N18D3 cells ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[2]		
	Cell Line:	N18D3 cells, hybrid neuronal cell line obtained by fusion of dorsal root ganglions isolated from 4-week-old Balb/C mouse with the mouse neuroblastoma N18TG2 cells	
	Concentration:	0, 10, 20, 30, 40, 50 mM	
	Incubation Time:	24 hours	
	Result:	There was a corresponding decrease in the percentage of survival cells ranging from 100±0.01% at 5 mM to 45.23±0.01% at 50 mM.	

CUSTOMER VALIDATION

- Hepatology. 2022 Jul 11.
- Cell Rep. 2022 Mar 8;38(10):110462.

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REFERENCES

- [1]. Heyes MP, et al. Quinolinic acid and kynurenine pathway metabolism in inflammatory and non-inflammatory neurological disease. Brain. 1992 Oct;115 (Pt 5):1249-73.
- [2]. Jang S, et al. Neuroprotective effects of (-)-epigallocatechin-3-gallate against quinolinic acid-induced excitotoxicity via PI3K pathway and NO inhibition. Brain Res. 2010 Feb 8;1313:25-33.

Caution: Product has not been fully validated for medical applications. For research use only.

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