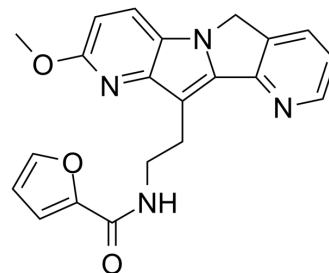


S29434

Cat. No.:	HY-122614		
CAS No.:	874484-20-5		
Molecular Formula:	C ₂₁ H ₁₈ N ₄ O ₃		
Molecular Weight:	374.39		
Target:	Autophagy		
Pathway:	Autophagy		
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 : 19.29 mg/mL (51.52 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.6710 mL	13.3551 mL	26.7101 mL
		5 mM	0.5342 mL	2.6710 mL	5.3420 mL
10 mM		0.2671 mL	1.3355 mL	2.6710 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: ≥ 1.93 mg/mL (5.16 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	S29434 (NMDPEF) is a potent, competitive, selective and cell-permeable inhibitor of quinone reductase 2 (QR2), with IC ₅₀ s ranging from 5 to 16 nM for human QR2 at different organizational levels, and has good selectivity for QR2 over QR1. S29434 induces autophagy and inhibits QR2-mediated ROS production ^[1] .	
IC₅₀ & Target	IC ₅₀ : 5 nM (h QR2, expressed in E. coli, NRH as co-substrate), 16 nM (h QR2, expressed in E. coli, with BNAH as co-substrate) ^[1]	
In Vitro	S29434 (5-10 μM; 24 h) induces HepG2 cells autophagy ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Autophagy Assay ^[1]	
	Cell Line:	HepG2 cell line

	Concentration:	5 and 10 μ M
	Incubation Time:	24 hours
	Result:	Mitochondrial ROS-independently and QR2-dependently triggered autophagy, and dose-dependently induced LC3-II which is a marker of autophagy vesicles.
In Vivo	S29434 (1 and 15 mg/kg; i.p. once) affects object recognition memory in vivo ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	CH3 wild-type mice ^[1]
	Dosage:	1 and 15 mg/kg
	Administration:	Intraperitoneal injection; 1 and 15 mg/kg once
	Result:	Positively affected memory by inhibiting QR2.

CUSTOMER VALIDATION

- Int J Mol Sci. 2021 Dec 2;22(23):13061.
- CNS Neurosci Ther. 2023 Jan 17.

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REFERENCES

[1]. Boutin JA, et al. S29434, a Quinone Reductase 2 Inhibitor: Main Biochemical and Cellular Characterization. Mol Pharmacol. 2019 Mar;95(3):269-285.

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

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