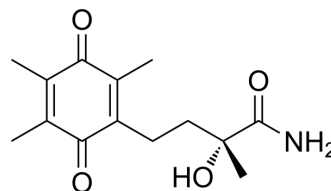


EPI-589

Cat. No.:	HY-125999		
CAS No.:	1147883-03-1		
Molecular Formula:	C ₁₄ H ₁₉ NO ₄		
Molecular Weight:	265.3		
Target:	Reactive Oxygen Species		
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB		
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 : 2 mg/mL (7.54 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.7693 mL	18.8466 mL	37.6932 mL
	5 mM	0.7539 mL	3.7693 mL	7.5386 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

EPI-589, a quinone derivative, is a safe and well tolerated oxidoreductase enzyme inhibitor and a free radical scavenger, with blood-brain barrier permeable and orally available. EPI-589 is a redox-active neuroprotectant that effectively delays the symptoms of motor neuron disease in wobbler mice. EPI-589 can be used in amyotrophic lateral sclerosis (ALS) research^{[1][2][3][4]}.

IC₅₀ & Target

IC₅₀: oxidoreductase enzyme^[1]

In Vivo

EPI-589 exhibits a significant improvement in cerebrospinal fluid (CSF) and plasma-based biomarkers known to be associated with neuroinflammation and ALS disease progression^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ng N, et al. Mitochondrial therapeutics and mitochondrial transfer for neurodegenerative diseases and aging. *Neural Regen Res.* 2025 Mar 1;20(3):794-796.

[2]. Matsumoto Y, et al. EPI-589, a redox-active neuroprotectant, potently protects cultured cells from oxidative stress and alleviates symptomatic and pathological progression of motor neuron disease in the wobbler mouse[J]. bioRxiv, 2022: 2022.03. 13.484182.

[3]. Martinez A, et al. Drugs in clinical development for the treatment of amyotrophic lateral sclerosis[J]. Expert opinion on investigational drugs, 2017, 26(4): 403-414.

[4]. BioElectron's EPI-589 Shows Positive Results in ALS Patients in Phase 2a Trial

[5]. Phase IIa trial of EPI-589 in ALS shows improvement in CSF

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

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