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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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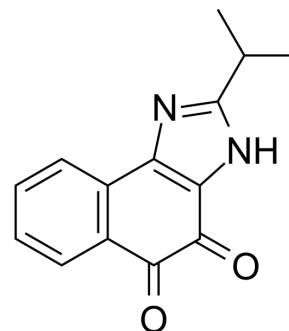
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KL1333

Cat. No.:	HY-128895		
CAS No.:	1800405-30-4		
Molecular Formula:	C ₁₄ H ₁₂ N ₂ O ₂		
Molecular Weight:	240.26		
Target:	Mitochondrial Metabolism		
Pathway:	Metabolic Enzyme/Protease		
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 (416.22 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		4.1622 mL	20.8108 mL	41.6216 mL
		5 mM		0.8324 mL	4.1622 mL	8.3243 mL
		10 mM		0.4162 mL	2.0811 mL	4.1622 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (10.41 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (10.41 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	KL1333, a derivative of β-lapachone, is an orally available NAD ⁺ modulator. KL1333 reacts with NAD(P)H:quinone oxidoreductase 1 (NQO1) as a substrate, resulting in increases in intracellular NAD ⁺ levels via NADH oxidation. KL1333 improves energy metabolism and mitochondrial dysfunction in MELAS fibroblasts. KL1333 protects against Cisplatin-induced ototoxicity in mouse cochlear cultures ^{[1][2]} .
IC ₅₀ & Target	NQO1 ^[1]
In Vitro	KL1333 is a potent modulator of the cellular levels of NAD ⁺ , a central co-enzyme in the cell's energy metabolism. Elevated NAD ⁺ levels triggers the activation of SIRT1 and AMPK, and subsequently activates PGC-1α ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Seo KS, et al. KL1333, a Novel NAD⁺ Modulator, Improves Energy Metabolism and Mitochondrial Dysfunction in MELAS Fibroblasts. *Front Neurol.* 2018;9:552. Published 2018 Jul 5.
- [2]. Lee HS, et al. KL1333, a derivative of β -lapachone, protects against cisplatin-induced ototoxicity in mouse cochlear cultures. *Biomed Pharmacother.* 2020;126:110068.
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Caution: Product has not been fully validated for medical applications. For research use only.

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