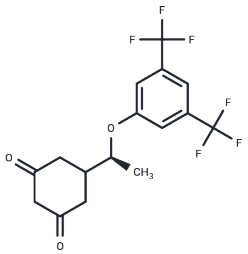
Data Sheet (Cat.No.T203125)

TargetMol

AKV-9

Chemical Properties



CAS No. : 1307262-15-2

Formula: C16H14F6O3

Molecular Weight: 368.27

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	AKV-9 is a mutant Cu/Zn superoxide dismutase (SOD1) inhibitor that effectively suppresses SOD1-induced protein aggregation and demonstrates significant protective effects against SOD1-induced cytotoxicity in PC-12 cells, with an EC50 of 0.3 μM. AKV-9 also ameliorates amyotrophic lateral sclerosis (ALS)-related phenotypes and significantly prolongs survival in mouse models, making it suitable for ALS pathogenesis and targeted therapy research.
Targets(IC50)	Others
In vitro	In in vitro models utilizing Upper Motor Neurons (UMNs) derived from hSOD1G93A mice, AKV-9 effectively reduced the levels of misfolded SOD1 and TDP-43 proteins. This treatment restored the structural integrity of mitochondria and the endoplasmic reticulum (ER), leading to improved axon length and branching [3].
In vivo	In in vivo animal models, AKV-9 demonstrated the ability to cross the blood-brain barrier. In hSOD1G93A ALS mice, daily administration of AKV-9 significantly improved motor performance, as evidenced by enhanced grip strength in the hanging wire test [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7154 mL	13.577 mL	27.154 mL
5 mM	0.5431 mL	2.7154 mL	5.4308 mL
10 mM	0.2715 mL	1.3577 mL	2.7154 mL
50 mM	0.0543 mL	0.2715 mL	0.5431 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Genç B, et al. NU-9 improves health of hSOD1G93A mouse upper motor neurons in vitro, especially in combination with riluzole or edaravone[J]. Scientific reports, 2022, 12(1): 5383.

Johnson E A, et al. Inhibition of amyloid beta oligomer accumulation by NU-9: A unifying mechanism for the treatment of neurodegenerative diseases[J]. Proceedings of the National Academy of Sciences, 2025, 122(10): e2402117122.

Genç B, et al. NU-9 improves health of hSOD1G93A mouse upper motor neurons in vitro and in vivo. Clin Transl Med. 2021 Feb;11(2):e337.

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