

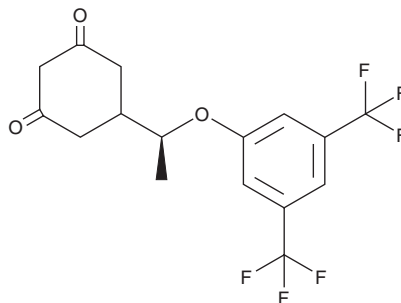
PRODUCT INFORMATION



NU 9

Item No. 33827

CAS Registry No.: 1307262-15-2
Formal Name: 5-[(1S)-1-[3,5-bis(trifluoromethyl)phenoxy]ethyl]-1,3-cyclohexanedione
Synonym: AKV9
MF: C₁₆H₁₄F₆O₃
FW: 368.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NU 9 is supplied as a solid. A stock solution may be made by dissolving the NU 9 in the solvent of choice, which should be purged with an inert gas. NU 9 is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

NU 9 is a neuroprotective compound.¹ It is protective against toxicity induced by superoxide dismutase 1 (SOD1) containing the G93A mutation (SOD1^{G93A}) in PC12 cells (EC₅₀ = 0.3 μM). NU 9 (20 mg/kg per day) reduces SOD1^{G93A} levels in upper motor neurons in a model of amyotrophic lateral sclerosis (ALS) using mice expressing human SOD1^{G93A}.² It improves motor behavior in the hanging wire test, but not the rotarod, in the same model when administered at a dose of 100 mg/kg. NU 9 (10 and 20 mg/kg) increases survival in another human SOD1^{G93A}-expressing mouse model of ALS.¹ NU 9 also reduces the accumulation of amyloid-β (1-42) (Aβ42) oligomers in primary hippocampal neurons in a cathepsin B- and lysosomal-dependent manner.³

References

1. Zhang, Y., Benmohamed, R., Zhang, W., *et al.* Chiral cyclohexane 1,3-diones as inhibitors of mutant SOD1-dependent protein aggregation for the treatment of ALS. *ACS Med. Chem. Lett.* **3**(7), 584-587 (2012).
2. Genç, B., Gautam, M., Gözütok, Ö., *et al.* Improving mitochondria and ER stability helps eliminate upper motor neuron degeneration that occurs due to mSOD1 toxicity and TDP-43 pathology. *Clin. Transl. Med.* **11**(2), e336 (2021).
3. Johnson, E.A., Nowar, R., Viola, K.L., *et al.* Inhibition of amyloid beta oligomer accumulation by NU-9: A unifying mechanism for the treatment of neurodegenerative diseases. *Proc. Natl. Acad. Sci. USA* **122**(10), e2402117122 (2025).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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