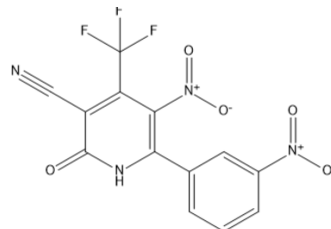


## SynuClean-D

Cat. No.:	HY-124876		
CAS No.:	685121-45-3		
Molecular Formula:	C <sub>13</sub> H <sub>5</sub> F <sub>3</sub> N <sub>4</sub> O <sub>5</sub>		
Molecular Weight:	354.2		
Target:	α-synuclein		
Pathway:	Neuronal Signaling		
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 : 83.33 mg/mL (235.26 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.8233 mL	14.1163 mL	28.2326 mL
	5 mM		0.5647 mL	2.8233 mL	5.6465 mL
	10 mM		0.2823 mL	1.4116 mL	2.8233 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (5.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (5.87 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

SynuClean-D (SC-D) is an inhibitor of α-synuclein aggregation, disrupts mature amyloid fibrils, prevents fibril propagation, and abolishes the degeneration of dopaminergic neurons in an animal model of Parkinson's disease<sup>[1]</sup>.

#### In Vitro

SynuClean-D significantly reduces the in vitro aggregation of wild-type α-synuclein and the familiar A30P and H50Q variants in a substoichiometric molar ratio. SynuClean-D prevents fibril propagation in protein-misfolding cyclic amplification assays and decreases the number of α-synuclein inclusions in human neuroglioma cells. Computational analysis suggests that SynuClean-D can bind to cavities in mature α-synuclein fibrils and, indeed, it displays a strong fibril disaggregation activity<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## In Vivo

The treatment with SynuClean-D of two parkinson's disease (PD) *Caenorhabditis elegans* models, expressing  $\alpha$ -synuclein either in muscle or in dopaminergic neurons, significantly reduces the toxicity exerted by  $\alpha$ -synuclein. SynuClean-D-treated worms show decreased  $\alpha$ -synuclein aggregation in muscle and a concomitant motility recovery. More importantly, this compound is able to rescue dopaminergic neurons from  $\alpha$ -synuclein-induced degeneration<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## REFERENCES

[1]. Pujols J, et al. Small molecule inhibits  $\alpha$ -synuclein aggregation, disrupts amyloid fibrils, and prevents degeneration of dopaminergic neurons. *Proc Natl Acad Sci U S A*. 2018 Oct 9;115(41):10481-10486.

---

**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](mailto:tech@MedChemExpress.com)

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