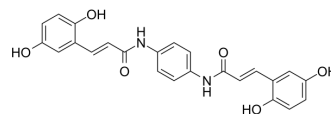


## $\alpha$ -Synuclein inhibitor 8

Cat. No.:	HY-152552
CAS No.:	2883627-64-1
Molecular Formula:	C <sub>24</sub> H <sub>20</sub> N <sub>2</sub> O <sub>6</sub>
Molecular Weight:	432.43
Target:	$\alpha$ -synuclein
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	$\alpha$ -Synuclein inhibitor 8 is an active inhibitor of $\alpha$ -Synuclein with an IC <sub>50</sub> value of 2.5 $\mu$ M. $\alpha$ -Synuclein inhibitor 8 has highly inhibition on the aggregation and disaggregation of $\alpha$ -Synuclein fibers. $\alpha$ -Synuclein inhibitor 8 reduces the formation of inclusions in neurons that can repairs damage neurons and improves Parkinson's disease (PD)-like symptoms. $\alpha$ -Synuclein inhibitor 8 has high antioxidant activity and low cytotoxicity <sup>[1]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 2.5 $\mu$ M <sup>[1]</sup>								
<b>In Vitro</b>	<p><math>\alpha</math>-Synuclein inhibitor 8 (Compound 2ee) (0-100 <math>\mu</math>M; 0-96 h) inhibits the aggregation of <math>\alpha</math>-Synuclein in a dose-dependent manner<sup>[1]</sup>.</p> <p><math>\alpha</math>-Synuclein inhibitor 8 (100 <math>\mu</math>M; 48 h) decomposes mature fiber into soluble protein and a small amount of short insoluble fiber<sup>[1]</sup>.</p> <p><math>\alpha</math>-Synuclein inhibitor 8 (1-1000 <math>\mu</math>M; 0.5 h or 24 h) increases the clearance rate of reactive oxygen species in a dose-dependent manner. <math>\alpha</math>-Synuclein inhibitor 8 has low cytotoxicity to H4 and SH-SY5Y cells (cell viability is higher than 80%)<sup>[1]</sup>.</p> <p><math>\alpha</math>-Synuclein inhibitor 8 (10 <math>\mu</math>M; 38 h) has inhibitory effect on <math>\alpha</math>-Synuclein aggregation and inclusion body formation in H4 cells<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>H4 and SH-SY5Y cells.</td> </tr> <tr> <td>Concentration:</td> <td>1, 3, 10, 30, 100, 300, 500 and 1000 <math>\mu</math>M.</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h.</td> </tr> <tr> <td>Result:</td> <td>Showed low cytotoxicity.</td> </tr> </table>	Cell Line:	H4 and SH-SY5Y cells.	Concentration:	1, 3, 10, 30, 100, 300, 500 and 1000 $\mu$ M.	Incubation Time:	24 h.	Result:	Showed low cytotoxicity.
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<b>In Vivo</b>	<p><math>\alpha</math>-Synuclein inhibitor 8 (Compound 2ee) (0.9 <math>\mu</math>g/<math>\mu</math>L; i.v.; single dose) significantly improves Parkinson's disease (PD)-like symptoms such as weak grip, limb stiffness and poor balance in C57 mice model of PD. <math>\alpha</math>-Synuclein inhibitor 8 has neuroprotective effect on the middle caudate putamen (CPU) and substantia nigra reticular (SNr) of the brain in C57 mice model of PD<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								

Animal Model:	6-OHDA-lesioned C57 mice model of PD (8-12 weeks, 20-28 g) <sup>[1]</sup> .
Dosage:	0.9 µg/µL.
Administration:	Intravenous injection (right striatum); single dose.
Result:	Exhibited neuroprotective and repair effects.

## REFERENCES

[1]. Lü MH, et al. Hybrids of polyphenolic/quinone acids, the potential preventive and therapeutic drugs for PD: Disaggregate  $\alpha$ -Syn fibrils, inhibit inclusions, and repair damaged neurons in mice. *Eur J Med Chem.* 2023 Jan 18;249:115122.

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

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