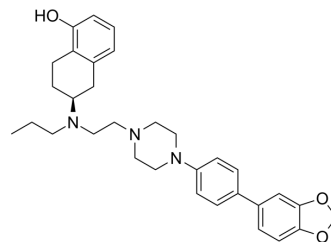


D-685

Cat. No.:	HY-149065
CAS No.:	2893801-00-6
Molecular Formula:	C ₃₂ H ₃₉ N ₃ O ₃
Molecular Weight:	513.67
Target:	α-synuclein
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	D-685, a prodrug of D-520, exhibits higher in vivo anti-Parkinsonian efficacy in a reserpinized Parkinson's disease (PD) animal model than the parent D-520. D-685 reduces accumulation of human α-synuclein (α-syn) protein. D-685 exhibits facile brain penetration ^[1] .								
In Vivo	<p>D-685 (12 mg/kg; intraperitoneally daily for 1 month) reduces the accumulation of α-synuclein in α-Syn tg mice^[1]. D-685 (10 μmol/kg; ip) is not only highly efficacious in reversing akinesia in male and female Sprague-Dawley rats weighing 220-225 g, compared to Reserpine (HY-N0480; 5.0 mg/kg; SC) alone, but also demonstrates significant enhancement of locomotion for the entire duration of the 6 h study^[1].</p> <p>D-685 exhibits facile penetration into the brain under ip administration with a high brain-to-plasma ratio (B/P: 4)^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Five-month-old D-Line α-syn tg Balb/c female mice 20-22 g^[1]</td> </tr> <tr> <td>Dosage:</td> <td>12 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneally daily for 1 month</td> </tr> <tr> <td>Result:</td> <td>Caused a significant reduction in α-syn accumulation in the neocortex and the striatum and a trend toward a reduction in the CA3 region of the hippocampus. There was a significant reduction in phospho-α-syn accumulation in all regions examined.</td> </tr> </table>	Animal Model:	Five-month-old D-Line α-syn tg Balb/c female mice 20-22 g ^[1]	Dosage:	12 mg/kg	Administration:	Intraperitoneally daily for 1 month	Result:	Caused a significant reduction in α-syn accumulation in the neocortex and the striatum and a trend toward a reduction in the CA3 region of the hippocampus. There was a significant reduction in phospho-α-syn accumulation in all regions examined.
Animal Model:	Five-month-old D-Line α-syn tg Balb/c female mice 20-22 g ^[1]								
Dosage:	12 mg/kg								
Administration:	Intraperitoneally daily for 1 month								
Result:	Caused a significant reduction in α-syn accumulation in the neocortex and the striatum and a trend toward a reduction in the CA3 region of the hippocampus. There was a significant reduction in phospho-α-syn accumulation in all regions examined.								

REFERENCES

[1]. Alope K Dutta, et al. D-685 Reverses Motor Deficits and Reduces Accumulation of Human α-Synuclein Protein in Two Different Parkinson's Disease Animal Models. ACS Chem Neurosci. 2023 Mar 1;14(5):885-896.

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

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