SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

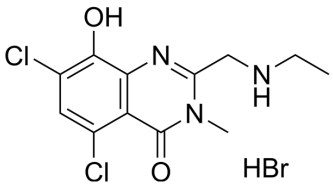
mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

PBT434

Cat. No.:	HY-120475
CAS No.:	1232841-78-9
Molecular Formula:	$C_{12}H_{14}BrCl_2N_3O_2$
Molecular Weight:	383.07
Target:	α-synuclein
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

PBT434 is a potent, orally active and cross the blood-brain barrier α-synuclein aggregation inhibitor. PBT434 can be used as a iron chelator and modulates transcellular iron trafficking. PBT434 inhibits iron-mediated redox activity and iron-mediated aggregation of α-synuclein. PBT434 prevents the loss of substantia nigra pars compacta neurons (SNpc). PBT434 has the potential for the research of Parkinson's disease (PD)[1].

In Vitro

PBT434 (0-20 μM; 3 h) significantly inhibits H_2O_2 production by iron and significantly reduces the rate of Fe-mediated aggregation of α-synuclein[1].
PBT434 (0-100 μM; 24 h) shows no cytotoxic effects on brain microvascular endothelial cells[2].
PBT434 (20 μM; 24 h) incrases the expression of total TfR, Cp protein level in hBMVEC[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[2]

Cell Line:	hBMVEC
Concentration:	1, 10, 20, 50, 100 μM
Incubation Time:	24 h
Result:	Showed no cytotoxic effects on brain microvascular endothelial cells.

Western Blot Analysis[2]

Cell Line:	hBMVEC
Concentration:	20 μM
Incubation Time:	24 h
Result:	Increased the expression of total TfR, Cp protein level.

In Vivo

PBT434 (30 mg/kg; p.o.; daily for 21 days) significantly preserved neuron numbers in the 6-OHDA intoxication model and shows significantly fewer rotations in the L-DOPA model, significantly reducing SNpc neuronal loss in the MPTP model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	12 weeks, 25 g, Male C57BL/6 J mice (6-OHDA intoxication model)[1]
Dosage:	30 mg/kg
Administration:	P.o.; daily for 21 days (commencing 3 days following induction of lesion)
Result:	Prevented neuronal loss following 6-OHDA, preserving up to 75% of the SNpc neurons remaining (both Nissl and tyrosine hydroxylase (TH) positive neurons) after the initial phase of cell death.

Animal Model:	12 weeks, 25 g, Male C57BL/6 J mice (6-OHDA intoxication model)[1]
Dosage:	1, 3, 10, 30, 80 mg/kg
Administration:	P.o.; daily for 21 days (commenced 24 h after induction of lesion)
Result:	Increased the proportion of SNpc cells rescued, increased there was a trend to improved turning behavior, significantly increased varicosity abundance, prevented the decline in levels of the presynaptic marker synaptophysin (SYNP) in a dose-dependent manner.

REFERENCES

[1]. Finkelstein DI, et al. The novel compound PBT434 prevents iron mediated neurodegeneration and alpha-synuclein toxicity in multiple models of Parkinson's disease. Acta Neuropathol Commun. 2017 Jun 28;5(1):53.

[2]. Bailey DK, Clark W, Kosman DJ. The iron chelator, PBT434, modulates transcellular iron trafficking in brain microvascular endothelial cells. PLoS One. 2021 Jul 26;16(7):e0254794.

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