

Product Data Sheet

Product Name: PBT434
Cat. No.: GC70495

Chemical Properties

Cas. No. 1232841-78-9

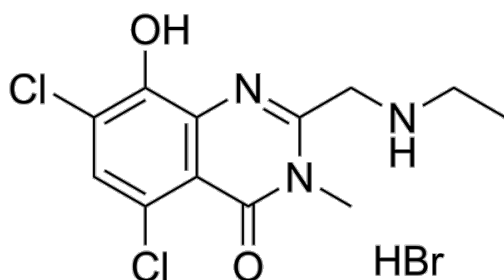
Formula $C_{12}H_{14}BrCl_2N_3O_2$ M.Wt 383.07

Solubility Storage

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

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).

PBT434 (0-20 μ M; 3 h) significantly inhibits H_2O_2 production by iron and significantly reduces the rate of Fe-mediated aggregation of α -synuclein^[1].

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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PBT434 (0-100 μ M; 24 h) shows no cytotoxic effects on brain microvascular endothelial cells [2].

PBT434 (20 μ M; 24 h) increases the expression of total TfR, Cp protein level in hBMVEC [2].

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].

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.

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