

Product Datasheet

MTK458

Catalog No. **BP-02025** · CAS **2499962-58-0** · Form **free base** · Physical state **solid** · Color **White to yellow** · Version **1.0** · Revision **2026-09-11**

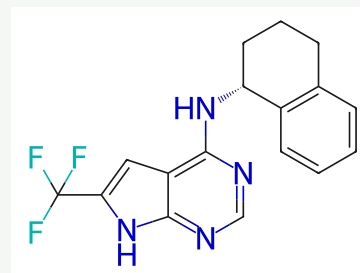
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Target PINK1/Parkin; Mitophagy; Mitochondrial Metabolism	Research area Neurological Disease; Cancer
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Molecular formula **C₁₇H₁₅F₃N₄**

Molecular weight **332.3230**

STRUCTURE



DESCRIPTION

MTK458 is an orally active brain penetrant PINK1 activator. MTK458 binds to PINK1 and stabilizes an active heterocomplex, thereby increasing mitophagy. MTK458 can be used for research on Parkinson's disease.

BIOLOGICAL ACTIVITY

In Vitro

MTK458 (25 μM) increases PINK1-mediated mitophagy to enhance clearance of intramitochondrial aggregates in Hela cells induced ΔOTC and YFP-Parkin.

MTK458 (0.1-25 μM) clears pS129 α-synuclein aggregates (12-250 kDa) in a dose-dependent manner in DIV9 and DIV12.

MTK458 (0-13 μM, 10 days) reduces α-synuclein pathology and the mitochondrial stress marker pUb in iPSC neurons.

In Vivo

MTK458 (50 mg/kg, p.o., daily, 6 months) drives clearance of pathologic α-synuclein in a dose-dependent manner in the stratum of mice injected with α-synuclein preformed fibrils (PFFs).

MTK458 (50 mg/kg, p.o., 6 doses, 5 days) decreases plasma pS65-Ubiquitin (pUb) in wild-type Sprague-Dawley rats.

SOLUBILITY

Soluble in DMSO : 100 mg/mL

REFERENCES

[1]. Chin RM, et al. Pharmacological PINK1 activation ameliorates Pathology in Parkinson's Disease models. bioRxiv [Preprint]. 2023 Feb 15:2023.02.14.528378.

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