# Data Sheet (Cat.No.T214396)

TargetMol

NPT100-18A

## Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

## Biological Description

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|---|---|
| Description | NPT100-18A is an inhibitor of α-synuclein oligomerization. It can restore cleaved caspase-3 levels to normal. NPT100-18A reduces mitochondrial oxidative stress probe levels in a compartment-specific manner and, at high concentrations, can increase ATP signaling. NPT100-18A is useful for research in Parkinson's disease (PD). |
| Targets(IC50) | Caspase |
| In vitro | NPT100-18A (10 nM) reduces the number of Triton-X100 insoluble α-synuclein aggregates in iPSC-derived mDAN. It specifically decreases mitochondrial ROS levels in iPSC-derived mDAN without affecting overall intracellular ROS levels. At a concentration of 1 μM, NPT100-18A significantly enhances ATP signaling in iPSC-derived mDAN. Administering NPT100-18A (10 nM) over 21 days notably reduces the percentage of cCasp3$^{+}$ neurons in iPSC-derived mDAN and inhibits early neuron apoptosis pathways associated with α-synuclein. |
| In vivo | NPT100-18A (1-20 mg/kg, intraperitoneally, once daily for 90 days) significantly improved motor dysfunction in mThy1-wt-α-syn transgenic mice and reduced α-syn oligomers and associated neurodegenerative pathology. |



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