

QC-01-175

## Chemical Properties

CAS No. : 2267290-96-8

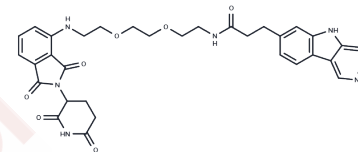
Formula: C33H34N6O7

Molecular Weight: 626.66

Keep away from direct sunlight

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

Description	QC-01-175 is a heterobifunctional small molecule specifically designed to induce degradation of aberrant tau protein, and it effectively reduces levels of A152T and P301L mutant tau, protects neurons from tau-mediated cytotoxicity. QC-01-175 significantly improves neuronal survival, thereby providing a valuable chemical biology tool for studying tauopathies and developing targeted protein degradation strategies for neurodegenerative diseases.
Targets(IC50)	Microtubule Associated,PROTACs
In vitro	In SH-SY5Y cells treated with ALS synaptosomes (ALS SNs), QC-01-175 (1-10 $\mu$ M) reduces the levels of hyperphosphorylated Tau, specifically the pTau-S396 variant. Treatment with 10 $\mu$ M QC-01-175 for 4 hours is associated with a reduction in mitochondrial fragmentation and a decrease in oxidative stress induced by ALS SNs. In FTD patient-derived neuronal cell models, the molecule has demonstrated the capacity to degrade aberrant Tau species [1][2].

## Solubility Information

Solubility	DMSO: 80 mg/mL (127.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.5958 mL	7.9788 mL	15.9576 mL
5 mM	0.3192 mL	1.5958 mL	3.1915 mL
10 mM	0.1596 mL	0.7979 mL	1.5958 mL
50 mM	0.0319 mL	0.1596 mL	0.3192 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Silva MC, et al. , Targeted degradation of aberrant tau in frontotemporal dementia patient-derived neuronal cell models. *Elife*. 2019 Mar 25;8:e45457.

Tiziana Petrozziello, et al. Targeting Tau Mitigates Mitochondrial Fragmentation and Oxidative Stress in Amyotrophic Lateral Sclerosis. *Mol Neurobiol*. 2022 Jan;59(1):683-702.

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