

Product Datasheet

USP30 inhibitor 18

Catalog No. **BP-02199** · CAS **2242582-40-5** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-07**

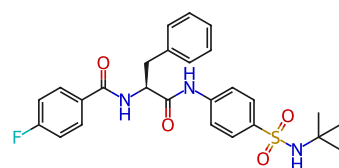
FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.

Target Mitophagy; Deubiquitinase	Research area Neurological Disease
--	--

Molecular formula **C₂₆H₂₈FN₃O₄S**

Molecular weight **497.5820**

STRUCTURE



DESCRIPTION

CMPD-39 is a selective non-covalent inhibitor of the ubiquitin-specific protease USP30 (IC₅₀=~20 nM), with high selectivity over other DUB family members (1-100 μM). CMPD-39 inhibits the deubiquitinating activity of USP30, enhances the ubiquitination of mitochondrial proteins TOMM20 and SYNJ2BP; thus, CMPD-39 promotes phosphoubitin accumulation, thereby accelerating mitochondrial autophagy (mitophagy) and peroxisomal autophagy (pexophagy). CMPD-39 significantly restores impaired mitochondrial function in dopaminergic neurons derived from Parkinson's disease patients[1][2].

BIOLOGICAL ACTIVITY

In Vitro

CMPD-39 (200 nM; 1-4 h) significantly enhances the ubiquitination levels of TOMM20 and SYNJ2BP in RPE1-YFP-PRKN and SHSY5Y cells, and depends on USP30 expression.

CMPD-39 (1 μM; 96 h) enhances basal mitophagy in SHSY5Y-mitoQC cells and significantly increases the number and area of mitophagosomes.

CMPD-39 (200 nM-1 μM; 96 h) significantly enhances peroxisomal autophagy in U2OS-Keima-SKL cells and increases the number and area of peroxisomes.

SOLUBILITY

soluble in DMSO

REFERENCES

[1]. Arthur F Kluge, et al. Novel highly selective inhibitors of ubiquitin specific protease 30 (USP30) accelerate mitophagy. Bioorg Med Chem Lett. 2018 Aug 15;28(15):2655-2659.

[2]. Rusilowicz-Jones EV, et al. Benchmarking a highly selective USP30 inhibitor for enhancement of mitophagy and pexophagy. Life Sci Alliance. 2021;5(2):e202101287.

Tel: +86 20 31130026 · Fax: +86 20 36822386 · tech@biochemprobe.com · www.biochemprobe.com

BiochemProbe is the catalog brand of Guangzhou Yuyuan Biotech Co., Ltd. · For research use only.

Lot CoA and SDS are separate documents.