Product Datasheet

LRK-4189

Catalog No. **BP-05339** · CAS **3063346-83-5** · Form **free base** · Physical state **solid** · Version **1.0** · Revision **2026-11-16**

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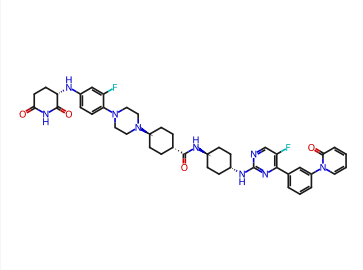
Target	Research area
mTOR	**Cancer**

Molecular formula	$C_{43}H_{49}F_2N_9O_4$
Molecular weight	**793.9039**

STRUCTURE



DESCRIPTION

LRK-4189 is an orally active PIP4K2C (a regulator of mTOR complex) degrader and type 1 immune activator. LRK-4189 induces the degradation of the lipid kinase PIP4K2C. LRK-4189 triggers the interferon signaling pathway in microsatellite-stable (MSS) colorectal cancer cells, activates immunogenic tumor killing, and induces endogenous cell death. LRK-4189 sensitizes microsatellite-stable colorectal cancer tumors to NK cell killing and dendritic cell phagocytosis. LRK-4189 can be used for the research of microsatellite-stable colorectal cancer.

BIOLOGICAL ACTIVITY

In Vitro

Anti-cancer

LRK-4189 (Compound 603) exhibits a 24 h DC50 of <500 nM against PIP4K2C in MOLT-4 cells[3].

In Vivo

Anti-cancer

LRK-4189 reduces tumor growth and improves survival in multiple CRC mouse models and in ex vivo primary human CRC spheroids[1].

REFERENCES

[1]. Krista B. Goodman, et al. Abstract B042: Clinical development and mechanism of action of LRK-4189, a first-in-class degrader of the lipid kinase PIP4K2C. Clin Cancer Res (2026) 32 (14_Supplement): B042.

[2]. Krista Goodman, et al. Abstract CT052: Proof of mechanism from a phase 1, single ascending dose (SAD) study to evaluate the safety, tolerability, pharmacokinetics, and pharmacodynamics of LRK-4189 in healthy subjects. Cancer Res (2026) 86 (8_Supplement): CT052.

[3]. Preparation of trisubstituted pyrimidine compounds as inhibitors and degraders of PIP4K protein. World Intellectual Property Organization, WO2024233846 A1.

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