

Product Datasheet

P22077

Catalog No. **BP-02491** · CAS **1247819-59-5** · Form **free base** · Physical state **solid** · Color **Light yellow to yellow** · Version **1.0**
· Revision **2026-09-10**

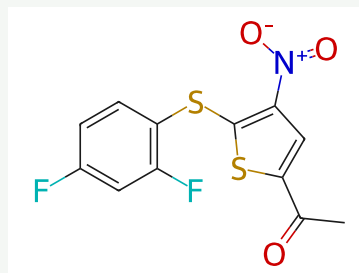
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Target Deubiquitinase	Research area Cancer
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Molecular formula **C₁₂H₇F₂NO₃S₂**

Molecular weight **315.3160**

STRUCTURE



DESCRIPTION

P 22077 is a cell-permeable ubiquitin-specific protease 7 (USP7) inhibitor with an EC₅₀ of 8.01 μM. P 22077 also inhibits USP47 with an EC₅₀ of 8.74 μM.

BIOLOGICAL ACTIVITY

In Vitro

P 22077 is an inhibitor of USP7 and DUB USP47, with EC₅₀s of 8.01 μM and 8.74 μM, respectively. P 22077 (15-45 μM) inhibits a much smaller subset of DUBs. P 22077 (25 μM) causes DUBs inhibition in HEK293T cells[1]. P 22077 (0-20 μM) greatly reduces the cell viability of Neuroblastoma (NB) cells including IMR-32, NGP, CHLA-255, and SH-SY5Y cells but without NB-19 and SK-N-AS cells. P 22077 (10 μM) increases p53 activity and induces apoptosis in p53 wild-type and HDM2-expressing NB cells. P 22077 (5 μM) enhances the cytotoxic effect of Dox and VP-16 on NB cells, and enhances Dox- and VP-16-induced p53-mediated apoptosis.

In Vivo

P 22077 (15 mg/kg, i.p. 21 days) shows potent antitumor activities in an xenograft mouse model bearing IMR-32-derived tumors; P 22077 also exhibits antitumor effects after treatment at 10 mg/kg for 14 days in mice bearing SH-SY5Y-derived tumors, and at 20 mg/kg for 12 days in mice bearing NGP-derived tumors.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1].Altun M, et al. Activity-based chemical proteomics accelerates inhibitor development for deubiquitylating enzymes. Chem Biol. 2011 Nov 23;18(11):1401-12.

[2].Fan YH, et al. USP7 inhibitor P22077 inhibits neuroblastoma growth via inducing p53-mediated apoptosis. Cell Death Dis. 2013 Oct 17;4:e867.

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Lot CoA and SDS are separate documents.