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USP7 inhibitor P22077

Chemical Name: 1-(5-((2,4-difluorophenyl)thio)-4-nitrothiophen-2-yl)ethanone



Molecular Weight:	315.32
Formula:	$C_{12}H_7F_2NO_3S_2$
Purity:	≥98%
CAS#:	1247819-59-5
Solubility:	DMSO up to 100 mM
Storage	Powder: 4°C 1 year
	DMSO: 4°C 3 month
	-20°C 1 year

Biological Activity:

P22077 is a potent and selective USP7 inhibitor that was recently identified using an Ub-CHOP reporter assay. It was shown to have potent and selective inhibitory activity against USP7 and closely related USP47 at $\sim\!5~\mu M$, but not other DUBs (at $\sim\!15\text{-}45~\mu M$). USP7, also known as HAUSP, plays an important role in cancer progression as it affects the stability of p53. The inhibition of USP7 is predicted to destabilize HDM2 and stabilize p53, and USP7 exerts both p53-dependent and p53-independent effects on controlling cell proliferation and apoptosis.

How to Use:

In vitro: P22077 was used at 25 μ M in vitro and in cells.

In vivo: n/a

Reference:

- 1. Mikael Altun et al. Activity-Based Chemical Proteomics Accelerates Inhibitor Development for Deubiquitylating Enzymes. (2011) Chemistry & Biology 18, 1401–1412.
- 2. Nicholson B, et al. The multifaceted roles of USP7: new therapeutic opportunities. (2011) Cell Biochem Biophys. 60(1-2):61-8.

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