FT671

Cat. No.: HY-107985

CAS No.: 1959551-26-8

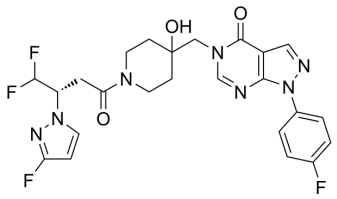
Molecular Formula: $C_{24}H_{23}F_4N_7O_3$

Molecular Weight: 533.48

Target: Deubiquitinase

Pathway: Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (93.72 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8745 mL	9.3724 mL	18.7448 mL
5 mM	0.3749 mL	1.8745 mL	3.7490 mL
10 mM	0.1874 mL	0.9372 mL	1.8745 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 5 mg/mL (9.37 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (9.37 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (9.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FT671 is a potent, non-covalent and selective USP7 inhibitor with an IC_{50} of 52 nM and binds to the USP7 catalytic domain with a K_d of 65 nM.

IC_{50} & Target

IC50: 52 nM (USP7)[1]

Kd: 65 nM (USP7)[1]

In Vitro

FT671 increases p53 protein levels in HCT116 or bone osteosarcoma (U2OS) cell lines, leading to induction of p53 target genes including BBC3 (which encodes PUMA), CDKN1A (p21), RPS27L (S27L) and MDM2. FT671 leads to the degradation of N-

	Myc and upregulation of p53 in the neuroblastoma cell line IMR-32. FT671 also stabilizes p53 in the MM.1S multiple myeloma cell line, which correlates with increased MDM2 ubiquitination and leads to expression of p53 target genes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	FT671 (100 mg/kg and 200 mg/kg, Oral gavage, daily) treatment in mice leads to a significant dose-dependent inhibition of tumor growth. And FT671 is well-torelated even at high doses[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Non-obese diabetic-severe combined immunodeficient (NOD–SCID) mice implanted with MM.1S cells[1].
Dosage:	100 mg/kg and 200 mg/kg.
Administration:	Oral gavage daily.
Result:	Led to a significant dose-dependent inhibition of tumor growth.

CUSTOMER VALIDATION

- Cell Rep. 2023 Apr 3;42(4):112339.
- Cell Rep. 2021 Oct 12;37(2):109819.
- Leiden Uiversity. Faculty of Medicine, Leiden University Medical Center. 2022.

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REFERENCES

[1]. Turnbull AP, et al. Molecular basis of USP7 inhibition by selective small-molecule inhibitors. Nature. 2017 Oct 26;550(7677):481-486.

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