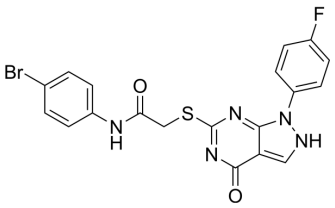
UCK2 Inhibitor-3

Cat. No.:	HY-148396
CAS No.:	2376687-49-7
Molecular Formula:	$C_{19}H_{13}BrFN_5O_2S$
Molecular Weight:	474.31
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	UCK2 Inhibitor-3 is a non-competitive inhibitor of uridine-cytidine kinase 2 (UCK2, a pyrimidine salvage enzyme) with an IC_{50} value of 16.6 μM. UCK2 can replace dihydroorotate dehydrogenase (DHODH), in a certain extent, in infected or rapidly dividing cells to continue efficient uridine salvage. UCK2 Inhibitor-3 also inhibits DNA polymerase eta and kappa with IC_{50}s of 56 μM and 16 μM[1].
IC_{50} & Target	IC50: 16.6 μM (UCK2); 56 μM (DNA polymerase η); 16 μM (DNA polymerase κ)[1]
In Vitro	Dihydroorotate dehydrogenase (DHODH), a rate-limiting enzyme in mammalian de novo pyrimidine synthesis. UCK2 can make up for DHODH in a certain extent, in infected or rapidly dividing cells for uridine salvage. DHODH inhibition has antiviral and anticancer significance, while UCK2 Inhibitor-3 suppress nucleoside salvage in cells both in the presence and absence of DHODH inhibitors[1]. UCK2 Inhibitor-3 (compound 135416439) is an inhibitor against pyrimidine salvage enzyme, non-competitive with Uridine and ATP with K_i values of 13 μM and 12 μM, respectively[1]. UCK2 Inhibitor-3 (50 μM) inhibits UCK2 with inhibition rate of 31.3%[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Okesli-Armlovich A, et al. Discovery of small molecule inhibitors of human uridine-cytidine kinase 2 by high-throughput screening. Bioorg Med Chem Lett. 2019 Sep 15;29(18):2559-2564.

Caution: Product has not been fully validated for medical applications. For research use only.

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