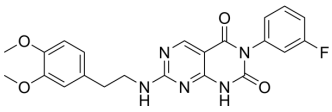
STL127705

Cat. No.:	HY-122727
CAS No.:	1326852-06-5
Molecular Formula:	$C_{22}H_{20}FN_5O_4$
Molecular Weight:	437.42
Target:	DNA-PK; Apoptosis
Pathway:	Cell Cycle/DNA Damage; PI3K/Akt/mTOR; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro	H_2O : < 0.1 mg/mL (ultrasonic) (insoluble) DMSO : < 1 mg/mL (insoluble or slightly soluble)

BIOLOGICAL ACTIVITY

Description	STL127705 (Compound L) is a potent Ku 70/80 heterodimer protein inhibitor with an IC_{50} of 3.5 μM. STL127705 interferes the binding of Ku70/80 to DNA and by inhibits the activation of the DNA-PKCS kinase. STL127705 shows antiproliferative and anticancer activity. STL127705 induces apoptosis[1][2].
IC_{50} & Target	IC50: 3.5 μM (Ku 70/80), 2.5 μM (DNA-PKCS)[1]

In Vitro

STL127705 (Compound L) (0-100 μM) inhibits binding of Ku70/80 to a DNA substrate and inhibits Ku-dependent activation of the DNA-PKCS kinase[1].

?STL127705 (0-100 μM; 6h) decreases the expression of DNA-PKCS auto-phosphorylation in SF-767 cells[1].

?STL127705 (0-40 μM; 6h) shows antiproliferative activity in a dose dependent manner[1].

?TL127705 (1 μM; 48 h) significantly promotes apoptotic when combination with gemcitabine[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	SF-767, PrEC cells
Concentration:	0-40 μM
Incubation Time:	6 h
Result:	Showed cytotoxicity in a dose dependent manner.

Western Blot Analysis[1]

Cell Line:	SF-767 cells

Concentration:	0-100 μM
Incubation Time:	pre-treated for 2 h and then co-incubation 4 h
Result:	Decreased the DNA-PKCS autophosphorylation but total DNA-PKCS was not suppressed by STL127705.

Apoptosis Analysis[1]

Cell Line:	H1299 cells
Concentration:	1 μM
Incubation Time:	48 h
Result:	Induced apoptosis with apoptosis rate significantly increased to 76% when treated with STL127705 in combination with gemcitabine.

CUSTOMER VALIDATION

- Immunity. 2021 Apr 13;54(4):632-647.e9.
- Nucleic Acids Res. 2023 Nov 1:gkad967.
- Biotechnol Bioeng. 2023 Apr 11.

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REFERENCES

[1]. Guo N, et al. Inhibiting nonhomologous end-joining repair would promote the antitumor activity of gemcitabine in nonsmall cell lung cancer cell lines. Anticancer Drugs. 2022 Jun 1;33(5):502-508.

[2]. Weterings E, et al. A novel small molecule inhibitor of the DNA repair protein Ku70/80. DNA Repair (Amst). 2016 Jul;43:98-106.

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