T-00127_HEV1

Cat. No.: HY-108313

CAS No.: 900874-91-1

Molecular Formula: $C_{22}H_{29}N_5O_3$

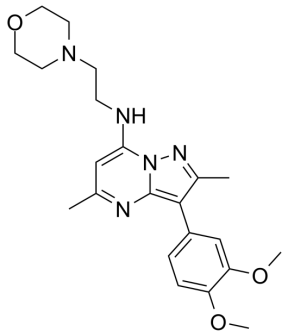
Molecular Weight: 412

Target: PI4K

Pathway: PI3K/Akt/mTOR

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (121.36 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4272 mL	12.1359 mL	24.2718 mL
	5 mM	0.4854 mL	2.4272 mL	4.8544 mL
	10 mM	0.2427 mL	1.2136 mL	2.4272 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: ≥ 2.5 mg/mL (6.07 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

T-00127_HEV1 is a phosphatidylinositol 4-kinase III beta (PI4KB) inhibitor with an IC_{50} of 60 nM.

IC_{50} & Target

PI4KB
60 nM (IC_{50})

In Vitro

T-00127_HEV1 shows more potent anti-poliovirus (PV) activity (EC_{50} of 0.77 μM) than other candidate compounds (EC_{50} of 1.7 to 4.7 μM). GW5074 and T-00127_HEV1 almost completely inhibit PI4KB kinase activity at 10 μM (3% and 5% of residual activity, respectively), in contrast to AN-12-H5 (108% of activity [no inhibition])[1].

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

PROTOCOL

Kinase Assay [1]	The inhibitory effect of T-00127_HEV1 at a concentration of 10 μM on in vitro cellular protein kinase activities is assessed by kinase profiling with an ATP concentration near the K_m for each kinase. Inhibitory effects of GW5074, AN-12-H5, and T-00127_HEV1 at a concentration of 10 μM on in vitro PI kinase activities are assessed by the SelectScreen kinase profiling service with an ATP concentration of 10 μM. For T-00127_HEV1, the 50% inhibitory concentration (IC_{50}) for in vitro PI4KB activity is also measured with an ATP concentration of 10 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Assay [1]	RD cells (1.0×10^4 cells per well in 100 μL medium) in a 96-well plate are infected with PV1, EV71, or CVB3 at multiplicities of infection (MOI) of 10, 1.0, and 0.1 at 37°C for 1 h in the absence of T-00127_HEV1. The cells are washed three times with 10% FCS-DMEM, followed by the addition of 100 μL of 10% FCS-DMEM containing 10 or 0 μM T-00127_HEV1. Cells are collected at 16 h p.i., and then viral RNA is extracted from the cells using a viral RNA purification kit. The number of copies of the viral genome is quantified using a real-time PCR system[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Cell Physiol. 2024 Jan 17.
- Patent. US20220273624A1.

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REFERENCES

[1]. Arita M, et al. Phosphatidylinositol 4-kinase III beta is a target of enviroxime-like compounds for antipoliovirus activity. J Virol. 2011 Mar;85(5):2364-72.

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