AMPK-IN-3

Cat. No.: HY-151361

CAS No.: 2417674-27-0

Molecular Formula: $C_{25}H_{33}N_5O_3$

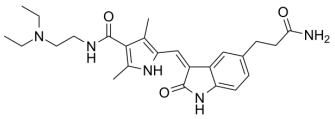
Molecular Weight: 451.56

Target: AMPK

Pathway: Epigenetics; PI3K/Akt/mTOR

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 115 mg/mL (254.67 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2145 mL	11.0727 mL	22.1455 mL
5 mM	0.4429 mL	2.2145 mL	4.4291 mL
10 mM	0.2215 mL	1.1073 mL	2.2145 mL

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

BIOLOGICAL ACTIVITY

Description

AMPK-IN-3 (compound 67) is a potent and selective AMPK inhibitor with IC_{50}s of 60.7, 107 and 3820 nM for AMPK (α2), AMPK (α1) and KDR, respectively. AMPK-IN-3 inhibits AMPK does not affect cell viability or cause significant cytotoxicity in K562 cells. AMPK-IN-3 can be used in study of cancer[1].

IC_{50} & Target

AMPK (α2)	AMPK (α1)	KDR
60.7 nM (IC_{50})	107 nM (IC_{50})	3820 nM (IC_{50})

In Vitro

AMPK-IN-3 (100 nM) shows inhibition values for AMPK(α2), FLT1, JAK1 JH2-pseudokinase and AMPK(α1) for 64%, 43%, 41% and 29%, respectively[1].

AMPK-IN-3 (0.195313, 0.78125, 3.125, 12.5, 50 μM; 2 h) decreases the level of p-ACC in K562 cells[1].

AMPK-IN-3 (1-100 μM; 24, 48, 72 h) shows potent inhibition of cellular AMPK activity but not affect cell viability[1].

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

Cell Viability Assay[1]

Cell Line:	K562 cells
Concentration:	0.195313, 0.78125, 3.125, 12.5, 50 μM
Incubation Time:	2 h
Result:	Decreased cellular levels of p-ACC(Ser79) in K562 cells.

Cell Viability Assay[1]

Cell Line:	K562 cells
Concentration:	1-100 μM
Incubation Time:	24, 48, 72 h
Result:	Showed no measurable impact on cell viability in K562 cells cultured under hypoxic conditions for 72 hours.

REFERENCES

[1]. Matheson CJ, et al. Substituted oxindol-3-ylidenes as AMP-activated protein kinase (AMPK) inhibitors. Eur J Med Chem. 2020 Jul 1;197:112316.

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