TC-DAPK 6

Cat. No.: HY-15513

CAS No.: 315694-89-4

Molecular Formula: $C_{17}H_{12}N_2O_2$

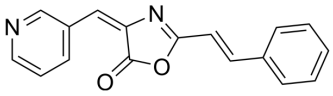
Molecular Weight: 276.29

Target: DAPK

Pathway: Apoptosis

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 : 18.67 mg/mL (67.57 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6194 mL	18.0969 mL	36.1939 mL
5 mM	0.7239 mL	3.6194 mL	7.2388 mL
10 mM	0.3619 mL	1.8097 mL	3.6194 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2 mg/mL (7.24 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

TC-DAPK 6 is a potent, ATP-competitive, and highly selective DAPK inhibitor (IC_{50}=69 and 225 nM against DAPK1 and DAPK3, respectively, with 10 μM ATP).

IC_{50} & Target

IC50: 69 nM (DAPK1), 225 nM (DAPK3)[1]

In Vitro

TC-DAPK 6 is found to be the most potent Death-associated protein kinase (DAPK) inhibitor with enzyme selectivity. When assayed with 10 μM ATP, the IC_{50} values for DAPK1 and DAPK3 are 69 and 225 nM, respectively. TC-DAPK 6 also inhibits p70S6K (1 μM < IC_{50}< 10 μM)[1].

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

PROTOCOL

Kinase Assay [1]

Kinase assay is performed using the Z'-LYTE kinase assay kit Ser/Thr 13 peptide. The standard reaction for compound screening contained 1 mM peptide substrate, 10 mM ATP, 50 mM HEPES (pH 7.4), 10 mM $MgCl_2$, 0.01% Brij-35, and 0.5% DMSO. Human recombinant DAPK1 is used at a final concentration of 2.6 μg/mL, and recombinant DAPK3 is used at a final concentration 1.5 mg/mL. To test the enzyme selectively of the inhibitors (e.g., TC-DAPK 6), ProfilerPro kits are used in the protocol[1].

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

CUSTOMER VALIDATION

- Theranostics. 2022 May 9;12(8):3847-3861.
- Theranostics. 2020 Sep 15;10(25):11479-11496.
- Biol Psychiatry. 2019 May 1;85(9):769-781.
- Cancer Sci. 2020 May 24;111(8):2803-2813.
- Exp Neurol. 2020 Jul;329:113303.

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REFERENCES

[1]. Okamoto M, et al. Identification of death-associated protein kinases inhibitors using structure-based virtual screening. J Med Chem. 2009 Nov 26;52(22):7323-7.

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