TC11

Cat. No.: HY-129478

CAS No.: 100823-03-8

Molecular Formula: $C_{20}H_{22}N_2O_2$

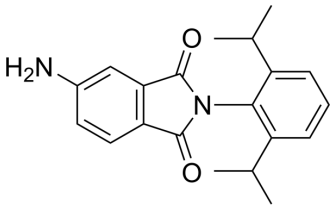
Molecular Weight: 322.4

Target: Caspase; Bcl-2 Family; CDK

Pathway: Apoptosis; Cell Cycle/DNA Damage

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (155.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1017 mL	15.5087 mL	31.0174 mL
	5 mM	0.6203 mL	3.1017 mL	6.2035 mL
	10 mM	0.3102 mL	1.5509 mL	3.1017 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TC11 is a MCL1 degrader. TC11 is also a Caspase-9 and CDK1 activator. TC11 structurally relates to immunomodulatory agents as phenylphthalimide derivative. TC11 induces apoptotic death caused by degradation of MCL1 during prolonged mitotic arrest[1][2].

IC_{50} & Target			
	CDK1	Caspase-9	MCL1

In Vitro

TC11 (0~30 μM; 24 hours; KMS34 cells) induces cell death in KMS34[1].

TC11 (5 μM; 0~48 hours; KMS34 cells) induces cell death occurs through an apoptotic pathway and downregulates MCL1 expression[1].

TC11 (5 μM; 24 hours; KMS34 cells) induces M arrest[1].

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

Cell Viability Assay[1]

Cell Line:	KMS34 cells
Concentration:	0~30 μM
Incubation Time:	24 hours
Result:	Induced cell death.

Western Blot Analysis[1]

Cell Line:	KMS34 cells
Concentration:	5 μM
Incubation Time:	0~48 hours
Result:	Induced cell death occurs through an apoptotic pathway and downregulated MCL1 expression.

Cell Cycle Analysis[1]

Cell Line:	KMS34 cells
Concentration:	5 μM
Incubation Time:	24 hours
Result:	Induced M arrest.

REFERENCES

[1]. Ichikawa D, et al. A phenylphthalimide derivative, TC11, induces apoptosis by degrading MCL1 in multiple myeloma cells. Biochem Biophys Res Commun. 2020;521(1):252-258.

[2]. Shiheido H, et al. A phthalimide derivative that inhibits centrosomal clustering is effective on multiple myeloma. PLoS One. 2012;7(6):e38878.

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