MAZ51

Cat. No.: HY-116624

CAS No.: 163655-37-6

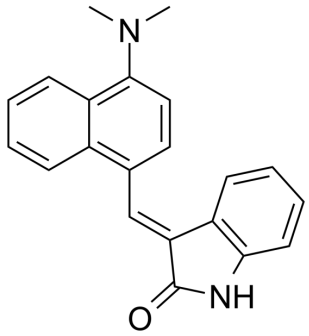
Molecular Formula: $C_{21}H_{18}N_2O$

Molecular Weight: 314.38

Target: VEGFR; Apoptosis

Pathway: Protein Tyrosine Kinase/RTK; Apoptosis

Storage: Powder -20°C 3 years
4°C 2 years
* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 8.33 mg/mL (26.50 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1809 mL	15.9043 mL	31.8086 mL
	5 mM	0.6362 mL	3.1809 mL	6.3617 mL
	10 mM	0.3181 mL	1.5904 mL	3.1809 mL

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

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 4 mg/mL (12.72 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.83 mg/mL (2.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MAZ51 is a selective inhibitor of VEGFR-3 (Flt-4) tyrosine kinase. MAZ51 inhibits VEGF-C-induced activation of VEGFR-3 without blocking VEGF-C-mediated stimulation of VEGFR2. MAZ51 had no effect on ligand-induced autophosphorylation of EGFR, IGF-1R and PDGFRβ. MAZ51 blocks proliferation and induces apoptosis in a wide variety of tumor cells. Antitumor activity[1][2].

IC_{50} & Target

VEGFR3

In Vitro

MAZ51 (2.5-10 μM; 24 hours) blocks proliferation and induces apoptosis in a wide variety of tumor cells[2].
MAZ51 (0.5-50 μM; 25 minutes) has no effect on ligand-induced autophosphorylation of EGFR, IGF-1R and PDGFRβ in A431 cells, HEK-293 cells, and PAE cells, respectively[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

Cell Line:	MT450, 1AS, ASM, G, AT6.1, MTLN3, MTLY, NM-081 cells
Concentration:	2.5, 10 μM
Incubation Time:	24 hours
Result:	Induced apoptosis in a wide variety of tumor cells.

Apoptosis Analysis[2]

Cell Line:	MT450, 1AS, ASM, G, AT6.1, MTLN3, MTLY, NM-081 cells
Concentration:	2.5, 10 μM
Incubation Time:	24 hours
Result:	Blocked proliferation in a wide variety of tumor cells.

In Vivo

MAZ51 (8 mg/kg; i.p.; daily for 15 day) significantly suppresses the growth of MT450 tumors[2].

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

Animal Model:	Wistar Furth rats (bearing MT450 cells)[1]
Dosage:	8 mg/kg
Administration:	Intraperitoneal injection; daily for 15 day
Result:	Significantly suppressed the growth of MT450 tumors.

CUSTOMER VALIDATION

- Mediat Inflamm. 2023 Apr 21.
- Research Square Print. 23 Dec 2022.

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REFERENCES

[1]. Kirkin V, et al. Characterization of indolinones which preferentially inhibit VEGF-C- and VEGF-D-induced activation of VEGFR-3 rather than VEGFR-2. Eur J Biochem. 2001 Nov;268(21):5530-40.

[2]. Kirkin V, et al. MAZ51, an indolinone that inhibits endothelial cell and tumor cell growth in vitro, suppresses tumor growth in vivo. Int J Cancer. 2004 Dec 20;112(6):986-93.

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