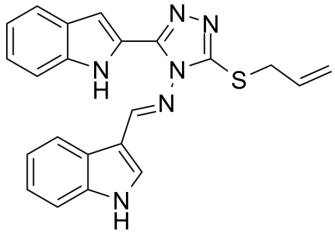
VEGFR2-IN-1

Cat. No.:	HY-145849
CAS No.:	2765224-55-1
Molecular Formula:	$C_{22}H_{18}N_6S$
Molecular Weight:	398.48
Target:	VEGFR
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

VEGFR2-IN-1 is a potent and selective VEGFR2 inhibitor (IC_{50}=19.8 nM). VEGFR2-IN-1 inhibits cell proliferation and migration through apoptosis activation and VEGFR2 inhibition[1].

IC_{50} & Target

VEGFR2
19.8 nM (IC_{50})

In Vitro

VEGFR2-IN-1 (compound 17; 0.1, 1, 10, 100 μM; 48 hours) shows an effective and selective agent against MCF-7 (IC_{50}=1.18 μM), MDA-MB-231 (IC_{50}=10.49 μM), MCF-10A (IC_{50}=24.76 μM) cells[1].VEGFR2-IN-1 (MCF-7 cells; 48 hours) induces cell cycle arrest at the G1 and S-phases[1].VEGFR2-IN-1 (MCF-7 cells) shows the upregulation of pro-apoptotic genes (p53, Bax, caspases-3, caspases-9) and downregulation of antiapoptotic gene (Bcl-2)[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	MCF-7, MDA-MB-231, MCF-10A cells
Concentration:	0.1, 1, 10, 100 μM
Incubation Time:	48 hours
Result:	Exhibited an effective and selective agent against MCF-7 (IC_{50}=1.18 μM), MDA-MB-231 (IC_{50} =10.49 μM), MCF-10A (IC_{50}=24.76 μM) cells.

In Vivo

VEGFR2-IN-1 (4.2 mg/kg; i.p.; once a day for 7 days) shows anticancer activity with an improvement of hematological, biochemical parameters[1].Animal Model: Male Swiss albino mice, 21-28 g (Xenograft model)[1].

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

Animal Model:	Male Swiss albino mice, 21-28 g (Xenograft model)[1]
Dosage:	4.2 mg/kg
Administration:	i.p.; once a days; 7 days
Result:	Showed anticancer activity by having a tumor inhibition ratio of 54.2% with an

	improvement of hematological, biochemical parameters.

REFERENCES

[1]. Nafie MS, Boraei ATA. Exploration of novel VEGFR2 tyrosine kinase inhibitors via design and synthesis of new alkylated indolyl-triazole Schiff bases for targeting breast cancer. Bioorg Chem. 2022; 122:105708.

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