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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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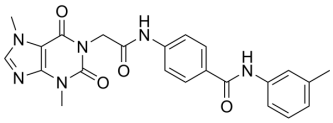
VEGFR-2-IN-47

Cat. No.:	HY-163747
Molecular Formula:	$C_{23}H_{22}N_6O_4$
Molecular Weight:	446.46
Target:	VEGFR
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

VEGFR-2-IN-47 (compound 7g) is a potent VEGFR-2 inhibitor with an IC_{50} value of 0.072 μM. VEGFR-2-IN-47 can induce G2 / M phase cell cycle arrest, promote apoptosis, and boost immunomodulation by downregulating TNF-α expression and upregulating IL-2 levels in MCF-7 cells. VEGFR-2-IN-47 has the potential to be used for the research of cancer such as breast cancer and liver carcinoma [1].

IC_{50} & Target

VEGFR2
0.072 μM (IC_{50})

In Vitro

VEGFR-2-IN-47 (compound 7g) (48 h) exhibits highly selective antiproliferative activity against MCF-7 and HepG2 cancer cells with IC_{50}s values of 19.35 and 27.89 μM, respectively. VEGFR-2-IN-47 displays low toxicity to a normal cell line (WI38) with an IC_{50} value of 51.14 μM, indicating a favorable safety profile[1].
VEGFR-2-IN-47(19.35 μM; 72 h) results in MCF-7 cells reduction in G0 / G1 phase and S phase, accumulation in G2 / M phase[1].
VEGFR-2-IN-47 (19.35 μM; 72 h) can promote apoptosis by downregulating Bcl-2 expression and upregulating Bax levels, and boost immunomodulation by downregulating TNF-α expression and upregulating IL-2 levels in MCF-7 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cycle Analysis[1]

Cell Line:	MCF-7 cells
Concentration:	19.35 μM
Incubation Time:	72 hours
Result:	Increased the cell population at the G2 / M phase compared to untreated cells from 16.41 to 24.89 %. Induced a decrease in the cell population at the G0 - G1 phase (from 59.04 to 54.51 %) and S phase (from 24.55 to 20.60 %).

Apoptosis Analysis[1]

Cell Line:	MCF-7 cells
Concentration:	19.35 μM
Incubation Time:	72 hours

Result:	Showed a significant increase in early and late apoptosis (17.65 and 7.21 %, respectively) compared to untreated cells (0.43 and 1.71 %, respectively).

Real Time qPCR[1]

Cell Line:	MCF-7 cells
Concentration:	19.35 μM
Incubation Time:	72 hours
Result:	Upregulated the expression of Bax by more than 4.5 times and downregulated Bcl-2 by more than 6 times. Exhibited a strong suppressive effect on the TNF-a (2.5 fold) and stimulatory effect on the IL-2 (3.3 fold) compared to the control cells.

REFERENCES

[1]. Jingyi Liu, et al. Identification of 3-(9H-carbazol-9-yl)-2-(1,3-dioxoisoindolin-2-yl)propanoic acids as promising DNMT1 inhibitors. Eur J Med Chem. 2024 Aug 5;274:116538.

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