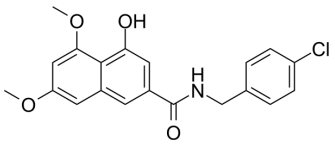
VEGFR-2/DHFR-IN-1

Cat. No.:	HY-151458
CAS No.:	2831498-15-6
Molecular Formula:	$C_{20}H_{18}ClNO_4$
Molecular Weight:	371.81
Target:	Bacterial; VEGFR; Dihydrofolate reductase (DHFR); Fungal
Pathway:	Anti-infection; Protein Tyrosine Kinase/RTK; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

VEGFR-2/DHFR-IN-1 (compound 8b) is an inhibitor of VEGFR-2 and DHFR with IC_{50}s of 0.384 and 7.881 μM, respectively. VEGFR-2/DHFR-IN-1 shows good antibacterial activities against Escherichia coli, Streptococcus faecalis, Salmonella enterica, MSSA and MRSA with MIC values of 16, 16, 16, 8, and 16 μg/mL, respectively. VEGFR-2/DHFR-IN-1 exhibits good cytotoxic activities against C26, HepG2, and MCF7 cancer cell lines with IC_{50} values of 2.97-7.12 μM. VEGFR-2/DHFR-IN-1 can be used for the research of cancer[1].

IC_{50} & Target

VEGFR-2	DHFR
0.384 μM (IC_{50})	7.881 μM (IC_{50})

In Vitro

VEGFR-2/DHFR-IN-1 (2-1024 μg/mL; 18-72 h) shows antibacterial and antifungal activities with MIC values of 16, 64, 16, 16, 8, 16, 64 and 256 μg/mL for Escherichia coli, Pseudomonas aeruginosa, Streptococcus faecalis, Salmonella enterica, MSSA, MRSA, Candida albicans and Aspergillus niger, respectively[1].

VEGFR-2/DHFR-IN-1 (0.5-100 μM; 48 h) exhibits anticancer activities[1].

VEGFR-2/DHFR-IN-1 (0-100 μM; 30 min) shows DHFR and VEGFR-2 inhibitory activities with IC_{50}s of 7.881 and 0.384 μM, respectively[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	C26, HepG2, MCF7 and H69PR cell lines
Concentration:	0.5, 1, 5, 10, 25, 50, 80 and 100 μM
Incubation Time:	48 hours
Result:	Showed anticancer activities to C26, HepG2, MCF7 and H69PR cells with IC_{50}s of 2.97, 7.12, 3.58 and 12.79 μM, respectively.

REFERENCES

[1]. Pham EC, et al. Design, Microwave-Assisted Synthesis, Antimicrobial and Anticancer Evaluation, and In Silico Studies of Some 2-Naphthamide Derivatives as DHFR and VEGFR-2 Inhibitors. ACS. 2022.

Caution: Product has not been fully validated for medical applications. For research use only.

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