EGFR/HER2-IN-7

Cat. No.: HY-151158

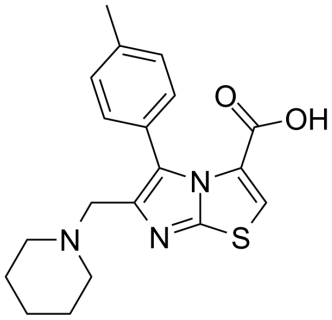
Molecular Formula: $C_{19}H_{21}N_3O_2S$

Molecular Weight: 355.45

Target: EGFR

Pathway: JAK/STAT Signaling; Protein Tyrosine Kinase/RTK

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

EGFR/HER2-IN-7 is a potent anticancer agent with high selectivity against MCF-7 breast cancer cells. EGFR/HER2-IN-7 is a EGFR/HER2 kinase and DHFR inhibitor, with IC_{50}s of 0.18 μM (EGFR), 0.146 μM (HER2), respectively. EGFR/HER2-IN-7 shows moderate inhibition on DHFR (IC_{50}=0.907 μM)[1].

IC_{50} & Target

0.18 μM (EGFR); 0.146 μM (HER2); 0.907 μM (DHFR)[1]

In Vitro

EGFR/HER2-IN-7 (compound 27) shows remarkable broad spectrum cytotoxic potency, with an IC_{50} value of 10.81 μM against MCF-7 breast cancer cells[1].

EGFR/HER2-IN-7 (72 h) displays anti-breast cancer activity with an IC_{50} value of 8.29 μM[1].

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

Cell Viability Assay[1]

Cell Line:	HepG2 hepatocellular carcinoma, MCF-7 breast cancer, HCT-116 colorectal carcinoma, PC-3 prostate and Hea cervical epithelioid carcinoma
Concentration:	0-1 mM
Incubation Time:	72 hours
Result:	Inhibited cancer cells growth with IC_{50}s of 10.81 μM (HepG2), 8.29 μM (MCF-7), 13.78 μM (HCT-116), 16.63 μM (PC3), 7.63 μM (Hela), respectively.

Cell Cytotoxicity Assay[1]

Cell Line:	Normal healthy cell line WI-38 (fetal lung fibroblast cells)
Concentration:	0-1 mM
Incubation Time:	72 hours
Result:	Showed low cytotoxicity against healthy cells with high IC_{50}s of >100 μM, 67.2 μM, 54.18, 89.61 μM, 36.84 μM, 49.75 μM, respectively.

REFERENCES

[1]. Sabry MA, et al. New thiazole-based derivatives as EGFR/HER2 and DHFR inhibitors: Synthesis, molecular modeling simulations and anticancer activity. Eur J Med Chem. 2022 Aug 10;241:114661.

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