hCAIX/XII-IN-1

Cat. No.: HY-146988

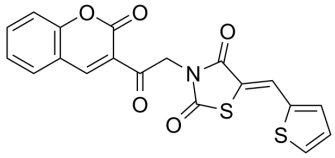
Molecular Formula: $C_{19}H_{11}NO_5S_2$

Molecular Weight: 397.42

Target: Carbonic Anhydrase; Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

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



BIOLOGICAL ACTIVITY

Description

hCAIX/XII-IN-1 is a potent CAIX/XII inhibitor with the K_I values of 0.48 μM and 0.83 μM for CAIX and CAXII, respectively. hCAIX/XII-IN-1 shows antiproliferative activity in vitro. hCAIX/XII-IN-1 induces apoptosis in MCF-7 cells[1].

IC_{50} & Target

K_I: 0.48 μM (CAIX); 0.83 μM (CAXII)[1]

In Vitro

hCAIX/XII-IN-1 (compound 11a) (3.125, 6.25, 12.5, 25, 50 μM, 48 h) shows antiproliferative activity with an IC_{50} value of 0.48 μM in MCF-7 cells[1].

hCAIX/XII-IN-1 (0.48 μM; 24 h) increases the cell populations of Sub-G1 phase[1].

hCAIX/XII-IN-1 (0.48 μM) induces apoptosis in MCF-7 cells[1].

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

Cell Proliferation Assay[1]

Cell Line:	MCF-7 cells
Concentration:	3.125, 6.25, 12.5, 25, 50 μM
Incubation Time:	48 h
Result:	Showed antiproliferative activity with an IC_{50} value of 0.48 μM in MCF-7 cells.

Cell Cycle Analysis[1]

Cell Line:	MCF-7 cells
Concentration:	0.48 μM
Incubation Time:	24 h
Result:	Significantly increased the cell populations of Sub-G1 phase.

Apoptosis Analysis[1]

Cell Line:	MCF-7 cells
Concentration:	0.48 μM

Incubation Time:	
Result:	Induced apoptosis in MCF-7 cells.

REFERENCES

[1]. Eldehna WM, et al. Discovery of 2,4-thiazolidinedione-tethered coumarins as novel selective inhibitors for carbonic anhydrase IX and XII isoforms. J Enzyme Inhib Med Chem. 2022; 37(1):531-541.

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