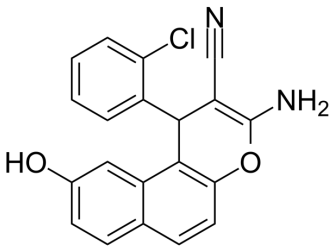
P-gp inhibitor 22

Cat. No.:	HY-162447
CAS No.:	1226674-74-3
Molecular Formula:	$C_{20}H_{13}ClN_2O_2$
Molecular Weight:	348.78
Target:	P-glycoprotein; Apoptosis
Pathway:	Membrane Transporter/Ion Channel; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

P-gp inhibitor 22 is a P-glycoprotein (P-gp) inhibitor that effectively inhibits P-pg and efflux function. P-gp inhibitor 22 induces apoptosis and accumulation of MCF-7/ADR cells processed in the S phase[1].

In Vitro

P-gp inhibitor 22 (compound 4b; 6.25-100 μM; 24 h) demonstrates significant vigour against MCF-7/ADR cells[1].
P-gp inhibitor 22 (compound 4b; 5 μM; 24 h) induces apoptosis and accumulation of MCF-7/ADR cells processed in the S phase[1].
P-gp inhibitor 22 inhibits a variety cell lines, such as PC-3, SKOV-3, HeLa, MCF-7/ADR, HFL-1, and WI-38 cells, the IC_{50} values of 3.3 μM, 0.7 μM, 2.4 μM, 5.0 μM, 72.0 μM, and 61.1 μM, respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	MCF-7/ADR cells
Concentration:	6.25 μM, 12.5 μM, 25 μM, 50 μM, 100 μM
Incubation Time:	24 h
Result:	Showed dose-dependent cytotoxicity in MCF-7/ADR cells.

Cell Cycle Analysis[1]

Cell Line:	MCF-7/ADR cells
Concentration:	5 μM
Incubation Time:	24 h
Result:	Showed cell cycle arrest at S phase and induced apoptosis.

REFERENCES

[1]. Ashraf H F Abd El-Wahab, et al. Design, synthesis and bioactivity study on oxygen-heterocyclic-based pyran analogues as effective P-glycoprotein-mediated multidrug resistance in MCF-7/ADR cell. Sci Rep. 2024 Mar 31;14(1):7589.

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

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