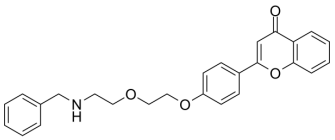
FM04

Cat. No.:	HY-149277
CAS No.:	1807320-40-6
Molecular Formula:	$C_{26}H_{25}NO_4$
Molecular Weight:	415.48
Target:	P-glycoprotein
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	FM04 is a potent P-glycoprotein (P-gp) inhibitor (EC_{50}=83 nM). FM04 inhibits P-gp in 2 mechanism: (1)FM04 binds to Q1193, followed by interacting with the functionally critical residues H1195 and T1226; or (2)FM04 binds to I1115 (a functionally critical residue itself), disrupting the R262-Q1081-Q1118 interaction pocket and uncoupling ICL2-NBD2 interaction and thereby inhibiting P-gp[1].
In Vitro	FM04 exhibits the EC_{50}=83 nM for inhibiting P-glycoprotein, while the EC_{50} value refers to effective concentration of the modulator at which the IC_{50} (=3.8 nM) of paclitaxel (PTX) in the P-gp overexpressing cell line LCC6MDR can be reduced by half[1]. FM04 (100 μM) shows competition with its photoaffinity derivative XC4 in LCC6MDR cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu Z, et al. Identification of Binding Sites in the Nucleotide-Binding Domain of P-Glycoprotein for a Potent and Nontoxic Modulator, the Amine-Containing Monomeric Flavonoid FM04. J Med Chem. 2023 Apr 25.

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