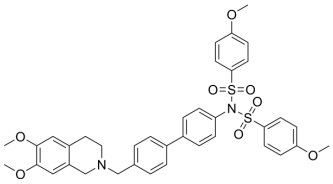
P-gp inhibitor 4

Cat. No.:	HY-146391
CAS No.:	2652001-05-1
Molecular Formula:	$C_{38}H_{38}N_2O_8S_2$
Molecular Weight:	714.85
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	P-gp inhibitor 4 (Compound 8b) is a selective P-glycoprotein modulator with an EC_{50} of 94 nM. P-gp inhibitor 4 increases agent transport across gastro-intestinal barrier and recovers doxorubicin toxicity in multidrug resistant cancer cells[1].
IC_{50} & Target	EC_{50}: 94 nM (P-glycoprotein)[1]

In Vitro

P-gp inhibitor 4 (Compound 8b) (0-1 μM, 48 h) significantly increases the cytotoxic effect of antineoplastic drug with co-administration[1].

P-gp inhibitor 4 does not alter the physiological properties of Caco-2 cells barrier model[1].

P-gp inhibitor 4 selectively reduces the activity of P-gp and increases the transport of multiple P-gp substrates across gastro-intestinal barrier[1].

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

Cell Proliferation Assay[1]

Cell Line:	MDCK-MDR_1
Concentration:	100 nM, 500 nM and 1 μM
Incubation Time:	48 h
Result:	Showed no cytotoxicity. Significantly increased the cytotoxic effect of antineoplastic drug.

Cell Viability Assay[1]

Cell Line:	Caco-2 cells
Concentration:	0.1 nM-100 μM
Incubation Time:	72 h
Result:	Displayed a dose-dependence cytotoxicity that was significant at ≥ 10 μM concentration. Did not reduce cell viability at 100 nM.

REFERENCES

[1]. Contino M, et al. One molecule two goals: A selective P-glycoprotein modulator increases drug transport across gastro-intestinal barrier and recovers doxorubicin toxicity in multidrug resistant cancer cells. Eur J Med Chem. 2020 Dec 15;208:112843.

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