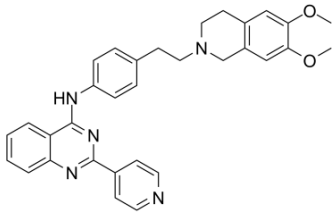
P-gp inhibitor 1

Cat. No.:	HY-101791
CAS No.:	2050747-49-2
Molecular Formula:	$C_{32}H_{31}N_5O_2$
Molecular Weight:	517.62
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 1 is a novel inhibitor reversing P-glycoprotein-mediated multidrug resistance.
IC_{50} & Target	P-glycoprotein[1]
In Vitro	P-gp inhibitor 1 (12k) possesses high potency (EC_{50}=57.9±3.5 nM), low cytotoxicity, and long duration of activity in reversing doxorubicin (DOX) resistance in K562/A02 cells (1 μM, 80 minutes)[1]. P-gp inhibitor 1 also boosts the potency of other MDR-related cytotoxic agents with different structures, increases accumulation of DOX, blocks Pgp-mediated Rh123 efflux, and suppresses P-gp ATPase activity in K562/A02 MDR cells (0.1, 1, 5 μM, 1 hour)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis[1]

Cell Line:	K562/A02 cell
Concentration:	0.1, 0.5, or 2.0 μM
Incubation Time:	72 hours
Result:	MDR reversal by 12k was not caused by a decreased protein expression but instead most likely due to direct inhibition of P-gp efflux[1].

REFERENCES

[1]. Qiu Q, et al. Design, Synthesis, and Pharmacological Characterization of N-(4-(2 (6,7-Dimethoxy-3,4-dihydroisoquinolin-2(1H)yl)ethyl)phenyl)quinazolin-4-amine Derivatives: Novel Inhibitors Reversing P-Glycoprotein-Mediated Multidrug Resistance. J Med Chem. 2017 Apr 27;60(8):3289-3302.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA