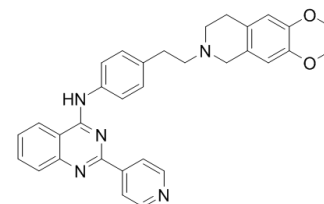


P-gp inhibitor 1

Cat. No.:	HY-101791
CAS No.:	2050747-49-2
Molecular Formula:	C ₃₂ H ₃₁ N ₅ O ₂
Molecular Weight:	517.62
Target:	P-glycoprotein
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	P-gp inhibitor 1 is a novel inhibitor reversing P-glycoprotein -mediated multidrug resistance.								
IC₅₀ & Target	P-glycoprotein ^[1]								
In Vitro	<p>P-gp inhibitor 1 (12k) possesses high potency (EC₅₀=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> <p>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].</p> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>K562/A02 cell</td> </tr> <tr> <td>Concentration:</td> <td>0.1, 0.5, or 2.0 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>72 hours</td> </tr> <tr> <td>Result:</td> <td>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].</td> </tr> </table>	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] .
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Concentration:	0.1, 0.5, or 2.0 μM								
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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.

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