**P-gp inhibitor 1**

Cat. No.: HY-101791  
CAS No.: 2050747-49-2  
Molecular Formula: C₃₂H₃₁N₅O₂  
Molecular Weight: 517.62  
Target: P-glycoprotein  
Pathway: Membrane Transporter/Ion Channel  
Storage: Please store the product under the recommended conditions in the COA.

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**BIOLOGICAL ACTIVITY**

<table>
<thead>
<tr>
<th>Description</th>
<th>P-gp inhibitor 1 is a novel inhibitor reversing P-glycoprotein-mediated multidrug resistance.</th>
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</thead>
<tbody>
<tr>
<td>IC₅₀ &amp; Target</td>
<td>P-glycoprotein[¹]</td>
</tr>
</tbody>
</table>

**In Vitro**

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-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].

**Western Blot Analysis[¹]**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>K562/A02 cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>0.1, 0.5, or 2.0 μM</td>
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<tr>
<td>Incubation Time:</td>
<td>72 hours</td>
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<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>
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**REFERENCES**


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

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