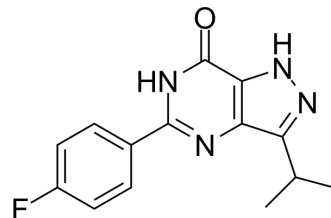


## NPD-2975

Cat. No.:	HY-155732
CAS No.:	3032452-65-3
Molecular Formula:	C <sub>14</sub> H <sub>13</sub> FN <sub>4</sub> O
Molecular Weight:	272.28
Target:	Parasite
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	NPD-2975 (compound 30) is an orally active antitrypanosomal agent, against Human African Trypanosomiasis (HAT). NPD-2975 has low toxicity potential against human MRC-5 lung fibroblasts, and acute mouse model of <i>T. b. brucei</i> infection. NPD-2975 shows acceptable metabolic stability, inhibits <i>T. b. brucei</i> with IC <sub>50</sub> of 70 nM in vitro. NPD-2975 also inhibits CYP enzymes resulted in IC <sub>50</sub> values of 0.16 and 0.42 μM against CYP1A2 and CYP2C19, respectively <sup>[1]</sup> .																					
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 70 nM ( <i>Trypanosoma brucei</i> ), 0.16 μM (CYP1A2), 0.42 μM (CYP2C19) <sup>[1]</sup>																					
<b>In Vivo</b>	NPD-2975 (25 mg/kg, twice daily for 5 days; po) increases the survival rate in a stage-I mouse model of HAT infection <sup>[1]</sup> .  Pharmacokinetic Analysis of NPD-2975 in Mouse Model <sup>[1]</sup>																					
	<table border="1"> <thead> <tr> <th>Route</th> <th>Dose (mg/kg)</th> <th>T<sub>max</sub> (h)</th> <th>C<sub>max</sub> (μM)</th> <th>T<sub>1/2</sub> (h)</th> <th>AUC<sub>0-6h</sub> (ng·h/mL)</th> <th>Cl (mL/min)</th> </tr> </thead> <tbody> <tr> <td>PO</td> <td>50</td> <td>1</td> <td>5.25</td> <td>3.46</td> <td>6064.75</td> <td>58.5</td> </tr> <tr> <td>IP</td> <td></td> <td>10</td> <td>13.18</td> <td>1.06</td> <td>3928.37</td> <td>171</td> </tr> </tbody> </table>	Route	Dose (mg/kg)	T <sub>max</sub> (h)	C <sub>max</sub> (μM)	T <sub>1/2</sub> (h)	AUC <sub>0-6h</sub> (ng·h/mL)	Cl (mL/min)	PO	50	1	5.25	3.46	6064.75	58.5	IP		10	13.18	1.06	3928.37	171
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	MCE has not independently confirmed the accuracy of these methods. They are for reference only.																					

### REFERENCES

[1]. Zheng Y, et al. Discovery of 5-Phenylpyrazolopyrimidinone Analogs as Potent Antitrypanosomal Agents with In Vivo Efficacy. *J Med Chem.* 2023 Aug 10;66(15):10252-10264.

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

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