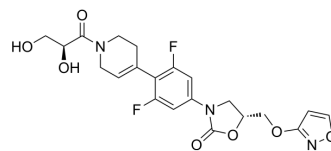


## Posizolid

Cat. No.:	HY-15993
CAS No.:	252260-02-9
Molecular Formula:	C <sub>21</sub> H <sub>21</sub> F <sub>2</sub> N <sub>3</sub> O <sub>7</sub>
Molecular Weight:	465.4
Target:	Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Posizolid (AZD2563), an oxazolidinone antibiotic, is developed by AstraZeneca for the study of bacterial infections. Posizolid shows very good anti-mycobacterial activity <sup>[1]</sup> .																
<b>IC<sub>50</sub> &amp; Target</b>	Oxazolidinone																
<b>In Vitro</b>	Posizolid is determined the activity of against 250 highly resistant pneumococci and 267 drug-susceptible isolates. Posizolid MICs for 50 and 90% of the strains tested are 1 and 2 µg/ml and 0.5 and 1 µg/ml, respectively, for the two isolate groups <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.																
<b>In Vivo</b>	<p>AZD5847 DSP (AZD2563 is prodrug) could not be detected in plasma 5 min after oral administration, suggesting rapid conversion of the prodrug to the parent molecule.</p> <p>In PK analysis, AZD5847(5 mg/kg) shows a low clearance (4.7 ml/min/kg) and volume of distribution (0.5 liter/kg) in mice, the half-life is 1.3 h<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male BALB/c mice, aged 6 to 8 weeks, 30 to 40 g<sup>[3]</sup>.</td> </tr> <tr> <td>Dosage:</td> <td>3, 10, 30, 100, 300, 600, and 900 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>oral; collect blood samples at 5 min, 10 min, 15 min, 30 min, 1 h, 2 h, 4 h, 6 h, and 24 h</td> </tr> <tr> <td>Result:</td> <td>AZD5847 DSP can't be detected in plasma 5 min.</td> </tr> </table> <table border="1"> <tr> <td>Animal Model:</td> <td>Male BALB/c mice, aged 6 to 8 weeks, 30 to 40 g<sup>[3]</sup>.</td> </tr> <tr> <td>Dosage:</td> <td>250 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>oral; collect blood and BAL fluid samples at 5 min, 15 min, 30 min, 1 h, 2 h, 4 h, 8 h, 16 h, 24 h, and 48 h</td> </tr> <tr> <td>Result:</td> <td>AZD5847(5 mg/kg) shows a low clearance (4.7 ml/min/kg) and volume of distribution (0.5 liter/kg) in mice, the half-life is 1.3 h.</td> </tr> </table>	Animal Model:	Male BALB/c mice, aged 6 to 8 weeks, 30 to 40 g <sup>[3]</sup> .	Dosage:	3, 10, 30, 100, 300, 600, and 900 mg/kg	Administration:	oral; collect blood samples at 5 min, 10 min, 15 min, 30 min, 1 h, 2 h, 4 h, 6 h, and 24 h	Result:	AZD5847 DSP can't be detected in plasma 5 min.	Animal Model:	Male BALB/c mice, aged 6 to 8 weeks, 30 to 40 g <sup>[3]</sup> .	Dosage:	250 mg/kg	Administration:	oral; collect blood and BAL fluid samples at 5 min, 15 min, 30 min, 1 h, 2 h, 4 h, 8 h, 16 h, 24 h, and 48 h	Result:	AZD5847(5 mg/kg) shows a low clearance (4.7 ml/min/kg) and volume of distribution (0.5 liter/kg) in mice, the half-life is 1.3 h.
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## REFERENCES

- [1]. Kumar D, et al. The anti-tuberculosis agents under development and the challenges ahead. *Future Med Chem.* 2015;7(15):1981-2003.
- [2]. Baum SE, et al. Comparative activities of the oxazolidinone AZD2563 and linezolid against selected recent North American isolates of *Streptococcus pneumoniae*. *Antimicrob Agents Chemother.* 2002;46(9):3094-3095.
- [3]. Balasubramanian V, et al. Pharmacokinetic and pharmacodynamic evaluation of AZD5847 in a mouse model of tuberculosis. *Antimicrob Agents Chemother.* 2014;58(7):4185-4190.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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