

## Actoxumab

Cat. No.:	HY-P99277
CAS No.:	1245634-25-6
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Actoxumab (Anti-C. difficile Toxin A Recombinant Antibody) is a antitoxin antibody against C. difficile toxin A by neutralizing TcdA. Actoxumab prevents both the damage to the gut wall and the inflammatory response, which are associated with C. difficile. Actoxumab has synergy effect with <a href="#">Bezlotoxumab</a> (HY-P9929) targeting TcdB <sup>[1]</sup> .																
<b>In Vitro</b>	Actoxumab (10 mg/kg WT or N297Q mutant (N297Q) actoxumab-bezlotoxumab; 2 h plus 24 h) significantly inhibits cell rounding activity in Vero cells under 2 ng/mL TcdA treatment <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.																
<b>In Vivo</b>	<p>Actoxumab (0.1-10 mg/kg or 50 mg/kg; i.p.; single dose) shows protective effect in multiple murine models of clostridium difficile infection (CDI), including systemic and local (gut) toxin challenge models, as well as primary and recurrent models of infection in mice<sup>[1]</sup>.</p> <p>Actoxumab shows a synergy with <a href="#">Bezlotoxumab</a>, and (combination dosage of 3, 30, 300 µg/mouse; i.p.; single dose) prevents both epithelial damage and inflammatory disease<sup>[1]</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>Murine C. difficile infection model in CD1 and C57BL/6 mice (6-8 weeks old)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>Combination dosage of 3, 30, 300 µg/mouse; or ~0.1, 1, and 10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; single dose; 1 hour before 25 ng TcdA or 25 ng TcdB challenge</td> </tr> <tr> <td>Result:</td> <td>Protected with Bezlotoxumab, against systemic and intestinal toxin challenge in mice.</td> </tr> </table> <table border="1"> <tr> <td>Animal Model:</td> <td>Ileal loop model in CD1 and C57BL/6 mice (6-8 weeks old)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>50 mg/kg; or combined with 50 mg/kg Bezlotoxumab</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; single dose</td> </tr> <tr> <td>Result:</td> <td>Significantly reduced fluid accumulation in toxin-challenged mice (109.4 mg/cm).</td> </tr> </table>	Animal Model:	Murine C. difficile infection model in CD1 and C57BL/6 mice (6-8 weeks old) <sup>[1]</sup>	Dosage:	Combination dosage of 3, 30, 300 µg/mouse; or ~0.1, 1, and 10 mg/kg	Administration:	Intraperitoneal injection; single dose; 1 hour before 25 ng TcdA or 25 ng TcdB challenge	Result:	Protected with Bezlotoxumab, against systemic and intestinal toxin challenge in mice.	Animal Model:	Ileal loop model in CD1 and C57BL/6 mice (6-8 weeks old) <sup>[1]</sup>	Dosage:	50 mg/kg; or combined with 50 mg/kg Bezlotoxumab	Administration:	Intraperitoneal injection; single dose	Result:	Significantly reduced fluid accumulation in toxin-challenged mice (109.4 mg/cm).
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### REFERENCES

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[1]. Yang Z, et al. Mechanisms of protection against Clostridium difficile infection by the monoclonal antitoxin antibodies actoxumab and bezlotoxumab. Infect Immun. 2015 Feb;83(2):822-31.

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

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