

Suvratoxumab

Cat. No.:	HY-P99583
CAS No.:	1629620-18-3
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Suvratoxumab (MEDI4893) is a long-acting, high-affinity human anti- α -toxin monoclonal antibody (IgG1 κ type). Suvratoxumab potently neutralizes α -toxin, a key <i>S. aureus</i> virulence factor. Suvratoxumab improves survival and reduces lung injury in an immunocompromised mice model of pneumonia. Suvratoxumab also enhances the antibacterial activity of Vancomycin (HY-B0671) or Linezolid (HY-10394) ^{[1][2][3]} .																
IC₅₀ & Target	α -toxin of <i>S. aureus</i> ^{[1][2][3]} .																
In Vivo	<p>Suvratoxumab (5, 15, 45 mg/kg; i.p.; single) increases survival rates in an immunocompromised murine pneumonia model^[1].</p> <p>Suvratoxumab (15 mg/kg; i.p.; single) prophylaxis reduces pulmonary damage and increases macrophage phagocytosis in mice^[1].</p> <p>Suvratoxumab (15 mg/kg; i.p.; single) prophylaxis improves the effectiveness of antibiotic (vancomycin or linezolid) treatment in mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Specific-pathogen-free, 7- to 9-week-old, female C57BL/6J mice (immunocompromised pneumonia model)^[1].</td> </tr> <tr> <td>Dosage:</td> <td>5, 15, 45 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; single</td> </tr> <tr> <td>Result:</td> <td>Resulted in dose-dependent increases in survival rates and reductions in bacterial CFU.</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Specific-pathogen-free, 7- to 9-week-old, female C57BL/6J mice (immunocompromised pneumonia model)^[1].</td> </tr> <tr> <td>Dosage:</td> <td>15 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; single</td> </tr> <tr> <td>Result:</td> <td>Prophylaxis protected the lungs of <i>S. aureus</i>-infected immunocompromised mice from α toxin-mediated damage.</td> </tr> </table>	Animal Model:	Specific-pathogen-free, 7- to 9-week-old, female C57BL/6J mice (immunocompromised pneumonia model) ^[1] .	Dosage:	5, 15, 45 mg/kg	Administration:	Intraperitoneal injection; single	Result:	Resulted in dose-dependent increases in survival rates and reductions in bacterial CFU.	Animal Model:	Specific-pathogen-free, 7- to 9-week-old, female C57BL/6J mice (immunocompromised pneumonia model) ^[1] .	Dosage:	15 mg/kg	Administration:	Intraperitoneal injection; single	Result:	Prophylaxis protected the lungs of <i>S. aureus</i> -infected immunocompromised mice from α toxin-mediated damage.
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REFERENCES

- [1]. Hua L, et al. MEDI4893* Promotes Survival and Extends the Antibiotic Treatment Window in a Staphylococcus aureus Immunocompromised Pneumonia Model. Antimicrob Agents Chemother. 2015 Aug;59(8):4526-32.
- [2]. Yu XQ, et al. Safety, Tolerability, and Pharmacokinetics of MEDI4893, an Investigational, Extended-Half-Life, Anti-Staphylococcus aureus Alpha-Toxin Human Monoclonal Antibody, in Healthy Adults. Antimicrob Agents Chemother. 2016 Dec 27;61(1):e01020-16.
- [3]. Oganessian V, et al. Mechanisms of neutralization of a human anti- α -toxin antibody. J Biol Chem. 2014 Oct 24;289(43):29874-80.
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Caution: Product has not been fully validated for medical applications. For research use only.

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