

Sofituzumab vedotin

Cat. No.:	HY-P99593
CAS No.:	1418200-58-4
Target:	Antibody-Drug Conjugates (ADCs)
Pathway:	Antibody-drug Conjugate/ADC Related
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Sofituzumab vedotin (DMUC5754A) is a MMAE-containing anti-MUC16 antibody-drug conjugate (ADC) with a protease-cleavable linker. Sofituzumab vedotin can be used for the research of cancer ^[1] .									
In Vitro	<p>Sofituzumab vedotin (DMUC5754A) is an antibody–drug conjugate (ADC) that contains the humanized IgG1 anti-MUC16 monoclonal antibody and a potent anti-mitotic agent, monomethyl auristatin E (MMAE), linked through a protease-labile linker, maleimidocaproyl-valine-citrulline-p-aminobenzyloxycarbonyl^[2].</p> <p>Sofituzumab vedotin (3A5-VC-MMAE; 0.1-10000ng/mL; 3 or 5 days) inhibits OVCAR-3 and PC3/MUC16Tmlong cells proliferation in a dose-dependent manner^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>OVCAR-3 and PC3/MUC16Tmlong cells</td> </tr> <tr> <td>Concentration:</td> <td>0.1-10000 ng/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>3 days for OVCAR-3 and 5 days for PC3/MUC16Tmlong</td> </tr> <tr> <td>Result:</td> <td>Significantly inhibited cell proliferation above 100 ng/mL.</td> </tr> </table>		Cell Line:	OVCAR-3 and PC3/MUC16Tmlong cells	Concentration:	0.1-10000 ng/mL	Incubation Time:	3 days for OVCAR-3 and 5 days for PC3/MUC16Tmlong	Result:	Significantly inhibited cell proliferation above 100 ng/mL.
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In Vivo	<p>Sofituzumab vedotin (3A5-VC-MMAE; 2 and 2.8 mg/kg; IV; once weekly for 3 or 4 total doses) shows potent anti-tumor activity in MUC16-expressing human OVCAR-3 mouse xenograft models^[3].</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>Female CB17 ICR severe combined immunodeficient mice, OVCAR-3/luc mouse xenografts^[3]</td> </tr> <tr> <td>Dosage:</td> <td>2.8 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>IV, once weekly for 4 total doses</td> </tr> <tr> <td>Result:</td> <td>Improved survival.</td> </tr> </table>		Animal Model:	Female CB17 ICR severe combined immunodeficient mice, OVCAR-3/luc mouse xenografts ^[3]	Dosage:	2.8 mg/kg	Administration:	IV, once weekly for 4 total doses	Result:	Improved survival.
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Animal Model:	Female CB17 ICR severe combined immunodeficient mice, OVCAR-3 tumors grown in the mammary fat pads ^[3]
Dosage:	2 mg/kg
Administration:	IV, once weekly for 3 total doses
Result:	Significantly decreased the tumor volume.

REFERENCES

- [1]. Manzano A, et al. Antibody-Drug Conjugates: A Promising Novel Therapy for the Treatment of Ovarian Cancer. *Cancers (Basel)*. 2020 Aug 9;12(8):2223.
- [2]. Liu JF, et al. Phase I study of safety and pharmacokinetics of the anti-MUC16 antibody-drug conjugate DMUC5754A in patients with platinum-resistant ovarian cancer or unresectable pancreatic cancer. *Ann Oncol*. 2016 Nov;27(11):2124-2130.
- [3]. Chen Y, et al. Armed antibodies targeting the mucin repeats of the ovarian cancer antigen, MUC16, are highly efficacious in animal tumor models. *Cancer Res*. 2007 May 15;67(10):4924-32.
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