# Glembatumumab vedotin

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| **Cat. No.:** | HY-141604 |
| **CAS No.:** | 1182215-65-1 |
| **Target:** | Antibody-Drug Conjugates (ADCs); Microtubule/Tubulin |
| **Pathway:** | Antibody-drug Conjugate/ADC Related; Cell Cycle/DNA Damage; Cytoskeleton |
| **Storage:** | -80°C, protect from light |

Glembatumumab vedotin

## BIOLOGICAL ACTIVITY

**Description**

Glembatumumab vedotin (CDX-011) is an ADC (antibody-drug conjugates (ADCs)) comprising a fully human IgG2 monoclonal antibody (CR011) directed against glycoprotein NMB (GPNMB) and conjugated to the potent tubulinbinding cytotoxic agent MMAE via a protease-sensitive vc linker. Glembatumumab vedotin has potent anticancer effects[1].

**In Vitro**

Glembatumumab vedotin binds to GPNMB on tumors, the complex is internalized and MMAE is released via proteolytic cleavage of the vc linker in a lysosomal compartment. Tumor cell death occurs as a result of microtubule inhibition by MMAE with resultant cell cycle arrest[1].

Glembatumumab vedotin (1-125 μg/mL; 96 hours) demonstrates osteosarcoma cytotoxic activity[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

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| Cell Line: | Osteosarcoma cell lines |
| Concentration: | 1 μg/mL to 125 μg/mL |
| Incubation Time: | 96 hours |
| Result: | Demonstrated osteosarcoma cytotoxic activity. |

**In Vivo**

Glembatumumab vedotin (CR011-vcMMAE; 1.25-80 mg/kg; i.v.; every 4 days; for 16 days) shows short-term anti-tumor effects (inhibition of tumor growth) and long-term effects (complete regression) in human SK-MEL-2 and SK-MEL-5 melanoma xenografts[2].

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| Animal Model: | Athymic mice (6-week-old) injected with human SK-MEL-2 and SK-MEL-5 melanoma cells [2] |
| Dosage: | 1.25 mg/kg, 2.5 mg/kg, 5 mg/kg, 10 mg/kg, 20 mg/kg, 40 mg/kg, 60 mg/kg, 80 mg/kg |
| Administration: | i.v.; every 4 days; for 16 days |
| Result: | Showed inhibition of tumor growth. |

## REFERENCES

[1]. Christopher H Keir, et al. The use of an antibody drug conjugate, glembatumumab vedotin (CDX-011), for the treatment of breast cancer. Expert Opin Biol Ther. 2012 Feb;12(2):259-63.

[2]. Vincent A Pollack, et al. Treatment parameters modulating regression of human melanoma xenografts by an antibody-drug conjugate (CR011-vcMMAE) targeting GPNMB. Cancer Chemother Pharmacol. 2007 Aug;60(3):423-35.

[3]. Michael Roth, et al. Targeting Glycoprotein NMB With Antibody-Drug Conjugate, Glembatumumab Vedotin, for the Treatment of Osteosarcoma. Pediatr Blood Cancer. 2016 Jan;63(1):32-8.



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