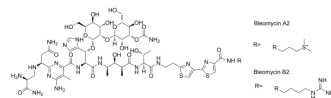


## Bleomycin

|           |   |
|-----------|---|
| Cat. No.: | HY-108345   |
| CAS No.:  | 11056-06-7  |
| Target:   | Antibiotic  |
| Pathway:  | Anti-infection  |
| Storage:  | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

|                                     |  |  |               |  |         |                |                 |   |         |  |
|-------------------------------------|--|--|---------------|--|---------|----------------|-----------------|---|---------|--|
| <b>Description</b>                  | Bleomycin is a glycopeptide antibiotic. Bleomycin has potent antitumour activities against a range of lymphomas, head and neck cancers and germ-cell tumours. Bleomycin can be used for the research of cancer and chemotherapy <sup>[1][2][3][4]</sup> .  |  |               |  |         |                |                 |   |         |  |
| <b>IC<sub>50</sub> &amp; Target</b> | Glycopeptide   |  |               |  |         |                |                 |   |         |  |
| <b>In Vitro</b>                     | <p>Bleomycin (0-4 mU/mL; 1 h) induces double-strand break in V79 cells<sup>[2]</sup>.</p> <p>Bleomycin (0-1 mU/mL; 1 h) reduces migration of DNA from S-phase cells<sup>[2]</sup>.</p> <p>Bleomycin (0-3 µg/mL; 1 h) induces chromatid aberrations in G2 cells<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>   |  |               |  |         |                |                 |   |         |  |
| <b>In Vivo</b>                      | <p>Bleomycin (1 mg and 10 µg; retro-orbitary sinus injection once) affects cells in mitosis, induces apoptosis in tumor models<sup>[4]</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>C57Bl/6 mice with LPB and B16F0 tumours<sup>[4]</sup></td> </tr> <tr> <td>Dosage:</td> <td>1 mg and 10 µg</td> </tr> <tr> <td>Administration:</td> <td>Retro-orbitary sinus injection; 1 mg and 10 µg once</td> </tr> <tr> <td>Result:</td> <td>Decreased in the fraction of cells in mitosis in both tumours, induced cell apoptosis after the electric pulses delivery, increased the amount of atypical cells in LPB tumours.</td> </tr> </table> |  | Animal Model: | C57Bl/6 mice with LPB and B16F0 tumours <sup>[4]</sup> | Dosage: | 1 mg and 10 µg | Administration: | Retro-orbitary sinus injection; 1 mg and 10 µg once | Result: | Decreased in the fraction of cells in mitosis in both tumours, induced cell apoptosis after the electric pulses delivery, increased the amount of atypical cells in LPB tumours. |
| Animal Model:                       | C57Bl/6 mice with LPB and B16F0 tumours <sup>[4]</sup>   |  |               |  |         |                |                 |   |         |  |
| Dosage:                             | 1 mg and 10 µg   |  |               |  |         |                |                 |   |         |  |
| Administration:                     | Retro-orbitary sinus injection; 1 mg and 10 µg once  |  |               |  |         |                |                 |   |         |  |
| Result:                             | Decreased in the fraction of cells in mitosis in both tumours, induced cell apoptosis after the electric pulses delivery, increased the amount of atypical cells in LPB tumours.   |  |               |  |         |                |                 |   |         |  |

### CUSTOMER VALIDATION

- MedComm. 2023 Jul 12;4(4):e319.
- Cancer Lett. 2023 Feb 15;558:216092.
- ACS Appl Mater Interfaces. 2019 Jan 16;11(2):1942-1950.
- Cell Death Dis. 2020 Nov 12;11(11):976.

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- Cell Death Dis. 2020 Jun 15;11(6):464.

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## REFERENCES

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- [1]. Olive PL, et al. Detection of DNA double-strand breaks through the cell cycle after exposure to X-rays, bleomycin, etoposide and 125I dUrd. Int J Radiat Biol. 1993 Oct;64(4):349-58.
- [2]. Allio T, Preston RJ. Increased sensitivity to chromatid aberration induction by bleomycin and neocarzinostatin results from alterations in a DNA damage response pathway. Mutat Res. 2000 Sep 20;453(1):5-15.
- [3]. Mekid H, et al. In vivo evolution of tumour cells after the generation of double-strand DNA breaks. Br J Cancer. 2003 Jun 2;88(11):1763-71.
- [4]. Chen J, Stubbe J. Bleomycins: towards better therapeutics. Nat Rev Cancer. 2005;5(2):102-112.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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