# β-Amanitin

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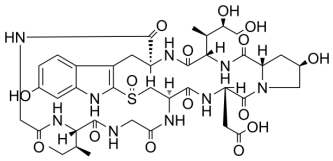
| **Cat. No.:** | HY-125586 |
| **CAS No.:** | 21150-22-1 |
| **Molecular Formula:** | $C_{39}H_{53}N_9O_{15}S$ |
| **Molecular Weight:** | 919.95 |
| **Target:** | DNA/RNA Synthesis; ADC Cytotoxin |
| **Pathway:** | Cell Cycle/DNA Damage; Antibody-drug Conjugate/ADC Related |
| **Storage:** | -20°C, sealed storage, away from moisture<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |



## BIOLOGICAL ACTIVITY

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| **Description** | β-Amanitin is a cyclic peptide toxin in the poisonous Amanita phalloides mushroom. β-Amanitin inhibits inhibits eukaryotic RNA polymerase II and III. β-Amanitin inhibits protein synthesis. β-Amanitin can be used as a cytotoxic component of antibody-drug conjugates (ADCs)[1][2]. |
| **$IC_{50}$ & Target** | Traditional Cytotoxic Agents |
| **In Vitro** | β-Amanitin (0.01-100 μg/mL; 36 hours) shows toxicity in MCF-7 cells, and the rates of cell viability are calculated as 52%, 62%, 84%, 86%, and 91% at concentrations of 100, 10, 1, 0.1, and 0.01 μg/mL, respectively[2].<br>β-Amanitin shows a great inhibition of protein synthesis at both concentrations (10 μg/mL and 1 μg/mL) in MCF-7 cells for 24 hours[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

Cell Viability Assay[2]

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| Cell Line: | MCF-7 cells |
| Concentration: | 0.01, 0.1, 1, 10, 100 μg/mL |
| Incubation Time: | 36 hours |
| Result: | Showed toxicity in MCF-7 cells. |

## REFERENCES

[1]. Kaya E, et al. Evaluation and comparison of alpha- and beta-amanitin toxicity on MCF-7 cell line. Turk J Med Sci. 2014;44(5):728-32.

[2]. Lutz C, et al. Alpha- and Beta-Amanitin Total Synthesis. Angew Chem Int Ed Engl. 2020 Feb 24.

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

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