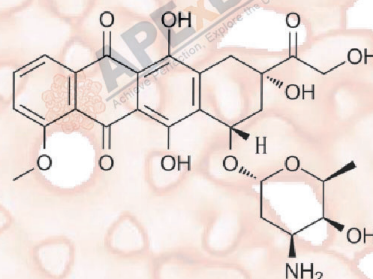


Product Data Sheet

Doxorubicin

| | |
|------------------|---|
| Cat. No.: | A3966 |
| CAS No.: | 23214-92-8 |
| Formula: | C ₂₇ H ₂₉ NO ₁₁ |
| M.Wt: | 543.52 |
| Synonyms: | Adriamycin, Doxil, Adriablastin, Doxorubicinum, Myocet |
| Target: | Topoisomerase |
| Pathway: | DNA Damage/DNA Repair |
| Storage: | Powder: Store at RT; Solution: Store at 4°C |



Solvent & Solubility

≥27.2 mg/mL in DMSO, insoluble in EtOH, ≥24.8 mg/mL in H₂O with ultrasonic

In Vitro

| | Solvent | Mass Concentration | 1mg | 5mg | 10mg |
|------------------------------|---------|-----------------------|-----------|-----------|------------|
| | | | | | |
| Preparing Stock Solutions | | 1 mM | 1.8399 mL | 9.1993 mL | 18.3986 mL |
| | | 5 mM | 0.3680 mL | 1.8399 mL | 3.6797 mL |
| | | 10 mM | 0.1840 mL | 0.9199 mL | 1.8399 mL |

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary

Topo II inhibitor, immunosuppressive antineoplastic antibiotic

IC₅₀ & Target

Cell Viability Assay

In Vitro

| | |
|----------------------|---|
| Cell Line: | MDA-MB-231 cells |
| Preparation method: | This compound is soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months. |
| Reacting conditions: | 20 nM; 72 hrs |

| | | |
|---------|--------------------------|---|
| In Vivo | Applications: | In MDA-MB-231 cells, SH003 at 120 µg/mL with Doxorubicin at 20 nM showed a synergistic effect. |
| | Animal experiment | |
| | Animal models: | Female athymic nude mice injected s.c. with MB231 cells |
| | Dosage form: | 3 mg/kg/day; delivered intratumorally |
| | Applications: | Doxorubicin in combination with adenoviral MnSOD (AdMnSOD) plus 1,3-bis(2-chloroethyl)-1-nitrosourea (BCNU) showed the greatest effect in decreasing the volumes of MB231 tumors and prolonging survival of mice. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

Product Citations

1. Zhang Y, Xia F, et al. "miR-135b-5p enhances doxorubicin-sensitivity of breast cancer cells through targeting anterior gradient 2." J Exp Clin Cancer Res. 2019 Jan 21;38(1):26.PMID:30665445
2. Goodspeed A, Jean A, et al. "A Whole-genome CRISPR Screen Identifies a Role of MSH2 in Cisplatin-mediated Cell Death in Muscle-invasive Bladder Cancer." Eur Urol. 2019 Feb;75(2):242-250.PMID:30414698
3. Deng Y, Li F, et al. "Triptolide sensitizes breast cancer cells to Doxorubicin through the DNA damage response inhibition." Mol Carcinog. 2018 Jun;57(6):807-814.PMID:29500880

See more customer validations on www.apexbt.com.

References

- [1]. Woo SM, Kim AJ, Choi YK, Shin YC, Cho SG, Ko SG. Synergistic Effect of SH003 and Doxorubicin in Triple-negative Breast Cancer. Phytother Res. 2016 Aug 1.
- [2]. Sun W, Kalen AL, Smith BJ, Cullen JJ, Oberley LW. Enhancing the antitumor activity of adriamycin and ionizing radiation. Cancer Res. 2009 May 15;69(10):4294-300.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX-BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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