# Dinactin

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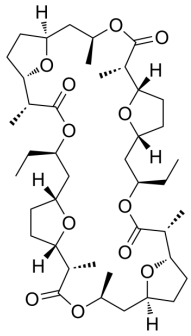
| **Cat. No.:** | HY-121333 |
| **CAS No.:** | 20261-85-2 |
| **Molecular Formula:** | $C_{42}H_{68}O_{12}$ |
| **Molecular Weight:** | 764.98 |
| **Target:** | Antibiotic; Wnt; β-catenin |
| **Pathway:** | Anti-infection; Stem Cell/Wnt |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | Dinactin, an antibiotic ionophore produced by Streptomyces species, as an effective small molecule targeting Wnt/β-catenin signaling pathway in cancer cells. Dinactin shows marked inhibition of HCT-116 cell growth with an $IC_{50}$ of 1.1 μM. Dinactin shows anti-proliferative activity against the cancer cells in apoptosis-independent manner. Dinactin is also an effective agent for the research of neuropathic pain[1]. |
| **In Vitro** | Dinactin (compound 1) shows antibacterial activity with MIC values of 1, 0.039, 0.019, 0.078, 0.078, 0.156, 0.156, 0.156, 0.156 μg/ml for M.tuberculosis(ATCC 25177), S. epidermidis(ATCC 12228), M. luteus(ATCC10240), S. aureus(ATCC 35923), E. faecalis (ATCC 51299), B. subtilis(ATCC 11774), E. coli(ATCC 10536), P. aeruginosa(ATCC 10145), K. pneumonia(ATCC BAA-2146) strain, respectively[1].<br>Dinactin (0-100 μM) shows antitumor activity with $IC_{50}$ values of 1.3, 1.1, 1.3, 1.5, 9.7, 80 μM for A549, HCT-116, T47D, MCF7, HepG2, HEK-293 cells, respectively[1].<br>Dinactin (0.5, 1, 2 μM; 24 h) induces morphological changes in a concentration dependent manner in HCT-116 cells[1].<br>inactin (0.5, 1, 2 μM; 24 h) effectively inhabits cell migration and invasion characteristics in HCT-116 cells[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Aehtesham Hussain, et al. Identification of dinactin, a macrolide antibiotic, as a natural product-based small molecule targeting Wnt/β-catenin signaling pathway in cancer cells. Cancer Chemother Pharmacol. 2019 Sep;84(3):551-559.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA