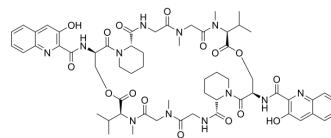


Sandramycin

Cat. No.:	HY-19829
CAS No.:	100940-65-6
Molecular Formula:	C ₆₀ H ₇₆ N ₁₂ O ₁₆
Molecular Weight:	1221.32
Target:	Bacterial; ADC Cytotoxin; Antibiotic
Pathway:	Anti-infection; Antibody-drug Conjugate/ADC Related
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sandramycin is a cyclic depsipeptide antibiotic isolated from cultured broth of a Nocardioides sp. Sandramycin is also a DNA intercalator that potently binds DNA and is an ADC cytotoxin. Sandramycin is active against Gram-positive bacteria and has potent antitumor activity ^{[1][2][3]} .								
IC₅₀ & Target	Traditional Cytotoxic Agents								
In Vitro	<p>Sandramycin has antimicrobial activity with MIC values of 0.024 µg/mL, 0.012 µg/mL, 0.012 µg/mL, 0.098 µg/mL, 0.024 µg/mL, 12.5 µg/mL and 12.5 µg/mL for Bacillus subtilis (Rec⁺) A22508-2, B. subtilis (Rec⁻) A22509-2-2, Staphylococcus aureus 209P-A9497, S. aureus (echinomycin-resistant) A9628, Streptococcus faecalis A96 1 1, Escherichia coli A151 19 and E. coli (actinomycin-sensitive) A21780 (AS-19), respectively^[1].</p> <p>Sandramycin inhibits cancer cells growth of L1210, B16, HCT118, RPMI8226, A431, RKO, SU-DHL6 and SU-DHL10 cells with IC₅₀ values of 0.02 nM, 0.07 nM, 0.8 nM, 3.8 nM, 3.1 nM, 1.3 nM, 5.9 nM and 3.3 nM, respectively^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>Sandramycin (0.0125-1.6 mg/kg; intraperitoneal injection; daily; for 5 days; CDF1 female mice) treatment shows moderately active in vivo against leukemia P388 in mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>CDF1 female mice injected with leukemia P388 cells^[1]</td> </tr> <tr> <td>Dosage:</td> <td>0.0125 mg/kg, 0.025 mg/kg, 0.05 mg/kg, 0.1 mg/kg, 0.2 mg/kg, 0.4 mg/kg, 0.8 mg/kg, 1.6 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; daily; for 5 days</td> </tr> <tr> <td>Result:</td> <td>Was moderately active in vivo against leukemia P388 in mice.</td> </tr> </table>	Animal Model:	CDF1 female mice injected with leukemia P388 cells ^[1]	Dosage:	0.0125 mg/kg, 0.025 mg/kg, 0.05 mg/kg, 0.1 mg/kg, 0.2 mg/kg, 0.4 mg/kg, 0.8 mg/kg, 1.6 mg/kg	Administration:	Intraperitoneal injection; daily; for 5 days	Result:	Was moderately active in vivo against leukemia P388 in mice.
Animal Model:	CDF1 female mice injected with leukemia P388 cells ^[1]								
Dosage:	0.0125 mg/kg, 0.025 mg/kg, 0.05 mg/kg, 0.1 mg/kg, 0.2 mg/kg, 0.4 mg/kg, 0.8 mg/kg, 1.6 mg/kg								
Administration:	Intraperitoneal injection; daily; for 5 days								
Result:	Was moderately active in vivo against leukemia P388 in mice.								

REFERENCES

[1]. J A Matson, et al. Sandramycin, a Novel Antitumor Antibiotic Produced by a Nocardioides Sp. Production, Isolation, Characterization and Biological Properties. J Antibiot (Tokyo). 1989 Dec;42(12):1763-7.

[2]. Katsushi Katayama, et al. Total Synthesis of Sandramycin and Its Analogues via a Multicomponent Assemblage. *Org Lett.* 2014 Jan 17;16(2):428-31.

[3]. D L Boger, et al. DNA Binding Properties of Key Sandramycin Analogues: Systematic Examination of the Intercalation Chromophore. *Bioorg Med Chem.* 1999 Feb;7(2):315-21.

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

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