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Zuschläge

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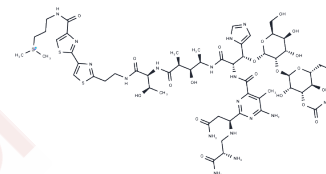
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Bleomycin hydrochloride

Chemical Properties

CAS No. :	67763-87-5
Formula:	C ₅₅ H ₈₄ ClN ₁₇ O ₂₁ S ₃
Molecular Weight:	1451.01
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Bleomycin hydrochloride is a potent antitumor antibiotic that functions as a DNA synthesis inhibitor and DNA damaging agent.
Targets(IC50)	DNA/RNA Synthesis
In vitro	Bleomycin hydrochloride is chosen as the best-studied micronucleus inducers in human lymphocytes with different mechanisms of genotoxicity. The most frequent Bleomycin-induced DNA lesions are single and double strand breaks and single apurinic/aprimidinic sites. At the same time Bleomycin is true radiomimetic compound, resembling almost completely the genetic effect of ionizing radiation[1]. The IC50 value of Bleomycin hydrochloride for UT-SCC-19A cell line is 4.0±1.3 nM. UT-SCC-12A and UT-SCC-12B are both more resistant to Bleomycin; IC50 values are 14.2±2.8 nM and 13.0±1.1 nM, respectively[2]. Bleomycin hydrochloride (50, 100µM; for 24, 48h) induce pulmonary fibrosis in RLE-6TN cell (50µM) and A549 cell (100µM)[4].
In vivo	Bleomycin hydrochloride treatment (3.5-4.0mg/kg; intra-tracheal) on day 0, body weights decreases by day 4 then increases by Day 7 through the end of the study[3]. Bleomycin hydrochloride (3.5-4.0mg/kg; intra-tracheal) produces a statistically significant increase in lung hydroxyproline levels, and also increases right caudal lung lobe mass[3]. Bleomycin hydrochloride (intratracheal instillation; 5.0mg/kg/day) induces pulmonary fibrosis in eighty 8-week-old male BALB/c mice with weight about 20-30g. Bleomycin induces the expression levels of α-SMA and collagen I[4]. Bleomycin hydrochloride (intratracheally; 2.5mg/kg; 1.25mg/ml, approximately 50µl per mouse) induces pulmonary fibrosis in male C57BL/6 mice (8weeks old, average weight approximately 24.5g)[5].

Solubility Information

Solubility	DMSO: 45 mg/mL (31 mM),Sonication and heating to 60°C are recommended. H2O: 80 mg/mL (55.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6892 mL	3.4459 mL	6.8918 mL
5 mM	0.1378 mL	0.6892 mL	1.3784 mL
10 mM	0.0689 mL	0.3446 mL	0.6892 mL
50 mM	0.0138 mL	0.0689 mL	0.1378 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Hovhannisyan G, et al. Comparative analysis of individual chromosome involvement in micronuclei induced by bleomycin in human leukocytes. *Mol Cytogenet.* 2016 Jun 21;9:49.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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