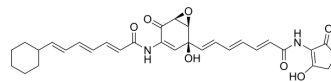


Asukamycin

Cat. No.:	HY-118893	
CAS No.:	61116-33-4	
Molecular Formula:	C ₃₁ H ₃₄ N ₂ O ₇	
Molecular Weight:	546.61	
Target:	Molecular Glues; Bacterial; Antibiotic; Fungal	
Pathway:	PROTAC; Anti-infection	
Storage:	Powder	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



BIOLOGICAL ACTIVITY

Description

Asukamycin, a manumycin-type metabolite, could be isolated from *Streptomyces nodosus* subsp. *asukaensis*. Asukamycin is an antibiotic and has antimicrobial activity. Asukamycin inhibits growth of various tumor cell lines^{[1][2]}.

In Vitro

Asukamycin (1-50 μM; 24 h) in a concentration-dependent manner reduces viability of five different human cell lines with IC₅₀ of 1-5 μM^[1].
 Asukamycin (50 μM; 24 and 72 h; THP-1 cells) causes a significant increase in intracellular caspase 8 and caspase 3 activity^[1].
 Asukamycin (0-100 mcg/mL; bacteria, 18 h; fungus, 72 h) has antimicrobial activity. Asukamycin inhibits the growth of Gram-positive bacteria within a concentration range of 0.78-12.5 mcg/mL and inhibits the growth of *Trichophyton mentagrophytes* at a concentration of 25 mcg/mL^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.
 Cell Viability Assay^[1]

Cell Line:	Human myeloid THP-1, HL-60, U-118 MG, U-87 MG and U-937 cells
Concentration:	1-50 μM
Incubation Time:	24 hours
Result:	Reduced viability of five different cell lines in a concentration-dependent manner.

In Vivo

Asukamycin (0-450 mg/kg; i.p.; mice) has low toxicity in vivo. Asukamycin has acute toxicity with an LD₅₀ value of 48.5 mg/kg by intraperitoneal injection^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice ^[2]
Dosage:	0-450 mg/kg
Administration:	Intraperitoneal injection
Result:	Had no effect on mice when administered by 450 mg/kg and the acute toxicity (LD ₅₀) was 48.5 mg/kg by intraperitoneal injection.

REFERENCES

- [1]. Shipley PR, et, al. Antitumor activity of asukamycin, a secondary metabolite from the actinomycete bacterium *Streptomyces nodosus* subspecies *asukaensis*. *Int J Mol Med*. 2009 Nov;24(5):711-5.
- [2]. Omura S, et, al. A new antibiotic,, asukamycin, produced by *Streptomyces*. *J Antibiot (Tokyo)*. 1976 Sep;29(9):876-81.
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Caution: Product has not been fully validated for medical applications. For research use only.

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