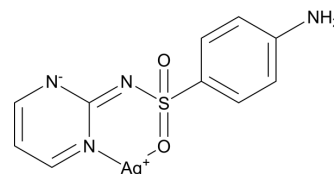


Silver sulfadiazine

Cat. No.:	HY-B1497
CAS No.:	22199-08-2
Molecular Formula:	C ₁₀ H ₉ AgN ₄ O ₂ S
Molecular Weight:	357.14
Target:	Antibiotic; Bacterial; DNA/RNA Synthesis
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble) H ₂ O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)
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BIOLOGICAL ACTIVITY

Description	Silver sulfadiazine (AgSD), a sulfonamide antibiotic, effects a dual inhibitory action on bacterial growth by its sulfa moiety (SD-SDZ) that prevents bacterial folate absorption and subsequent DNA synthesis. The silver that is released from Silver sulfadiazine binds and disrupts the DNA structure, precluding bacterial DNA replication ^[1] .
In Vitro	Silver sulfadiazine (AgSD) is a topical antibiotic used to the research of bacterial infection in burns ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Strydom SJ, et al. Poly(amidoamine) dendrimer-mediated synthesis and stabilization of silver sulfonamide nanoparticles with increased antibacterial activity. *Nanomedicine*. 2013;9(1):85-93.

[2]. Munhoz DR, et al. Alginate films functionalized with silver sulfadiazine-loaded [Mg-Al] layered double hydroxide as antimicrobial wound dressing. *Int J Biol Macromol*. 2019;141:504-510.

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

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