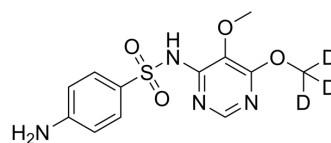


## Sulfadoxine-d<sub>3</sub>

<b>Cat. No.:</b>	HY-B0439S1	
<b>CAS No.:</b>	1262770-70-6	
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>11</sub> D <sub>3</sub> N <sub>4</sub> O <sub>4</sub> S	
<b>Molecular Weight:</b>	313.35	
<b>Target:</b>	Parasite; Antibiotic	
<b>Pathway:</b>	Anti-infection	
<b>Storage:</b>	Powder	-20°C 3 years 4°C 2 years
	In solvent	-80°C 6 months -20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (319.13 mM)  
 H<sub>2</sub>O : 0.1 mg/mL (0.32 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	1 mg	5 mg	10 mg
	Concentration	Mass		
1 mM		3.1913 mL	15.9566 mL	31.9132 mL
5 mM		0.6383 mL	3.1913 mL	6.3826 mL
10 mM		0.3191 mL	1.5957 mL	3.1913 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Sulfadoxine-d<sub>3</sub> is a deuterium labeled [Sulfadoxine](#) (HY-B0439). Sulfadoxine is a sulfonamide that is used, usually in combination with [Pyrimethamine](#) (HY-18062), for multidrug-resistant Plasmodium falciparum and P. vivax inhibition. Unlike PYR, Sulfadoxine has no impact on HIV replication or MT-2 cell cycle progression. But also Sulfadoxine exhibits suppression on respiratory, and urinary tract infections[1][2][3][4].

#### IC<sub>50</sub> & Target

Plasmodium

#### In Vitro

Sulfadoxine (0-100 μM; 7 d) has no impact on HIV-1 replication in MT-2 cells<sup>[4]</sup>.  
 Sulfadoxine (100 μM; 48 h) has no impact on induction of S-phase accumulation in MT-2 cells<sup>[4]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Sulfadoxine (0.1, 0.3, 10 mg/kg/d; p.o.; once daily for 3 d) in combination with azithromycin (30 mg/kg/d; p.o.; once daily for 3 d) shows efficacy against blood stage parasites or Plasmodium yoelii sporozoite in a mouse malaria model<sup>[5]</sup>.

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## REFERENCES

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- [2]. Fey K, et al. Empfindlichkeit bakterieller Krankheitserreger aus dem Respirationstrakt von Pferden gegenüber Trimethoprim, Sulfadoxin, Sulfadimethoxin und Kombinationen dieser Wirkstoffe [Susceptibility of bacterial isolates from the equine respiratory tract to trimethoprim, sulfadoxine, sulfadimethoxine and combinations of these compounds]. *Tierarztl Prax.* 1995 Apr;23(2):148-54. German.
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- [4]. Oguariri RM, et al. Evaluation of the effect of pyrimethamine, an anti-malarial drug, on HIV-1 replication. *Virus Res.* 2010 Nov;153(2):269-76.
- [5]. Neerja J, et al. *Plasmodium yoelii*: activity of azithromycin in combination with pyrimethamine or sulfadoxine against blood and sporozoite induced infections in Swiss mice. *Exp Parasitol.* 2004 Jul-Aug;107(3-4):120-4.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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