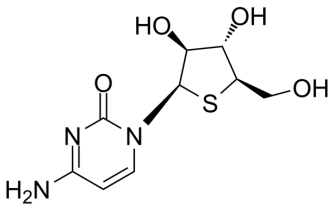
Thiarabine

Cat. No.:	HY-16496
CAS No.:	26599-17-7
Molecular Formula:	$C_9H_{13}N_3O_4S$
Molecular Weight:	259.28
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Thiarabine (OSI-7836) shows potent anti-tumor activity and inhibition of DNA synthesis.
IC_{50} & Target	DNA synthesis[1].
In Vivo	Thiarabine has demonstrated exceptional antitumor activity against numerous human tumor xenografts in mice, being superior to gemcitabine, clofarabine, or cytarabine. Unlike cytarabine, Thiarabine demonstrates excellent activity against solid tumor xenografts, suggesting that this agent has the kind of robust activity in animal models that leads to clinical utility. Thiarabine is effective orally (bioavailability of approximately 16%) and with once per day dosing: Two characteristics that distinguish it from cytarabine. Although both the structure and basic mechanism of action of Thiarabine are similar to that of cytarabine, there are many quantitative differences in the biochemical pharmacology of these two agents that can explain the superior antitumor activity of Thiarabine. Two important attributes are the long retention time of the 5'-triphosphate of thiarabine in tumor cells and its potent inhibition of DNA synthesis. The biochemical pharmacology of Thiarabine is also different from that of gemcitabine[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Parker WB, et al. Thiarabine, 1-(4-Thio-β-D-arabinofuranosyl)cytosine. A Deoxycytidine Analog With Excellent Anticancer Activity. Curr Med Chem. 2015;22(34):3881-96.

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