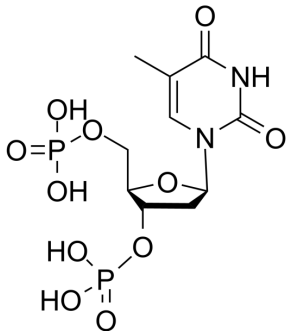
Thymidine 3',5'-disphosphate

Cat. No.:	HY-115581
CAS No.:	2863-04-9
Molecular Formula:	$C_{10}H_{16}N_2O_{11}P_2$
Molecular Weight:	402.19
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Thymidine 3',5'-disphosphate (Deoxythymidine 3′,5′-diphosphate; pdTp) is a selective small molecule inhibitor of staphylococcal nuclease and tudor domain containing 1 (SND1, the miRNA regulatory complex RISC subunit) and inhibits SND1 activity. Thymidine 3',5'-disphosphate exhibits anti-tumor efficacy in vivo[1].
IC_{50} & Target	Staphylococcal nuclease and tudor domain containing 1, SND1[1]
In Vitro	Thymidine 3',5'-disphosphate (200 μM; 18 h) significantly reduces the expression level of p65 and p65 nuclear translocation in WT and Alb/SND1 (specific transgenic mouse overexpressing SND1) hepatocytes by inhibiting staphylococcal nuclease and tudor domain containing 1 (SND1) enzyme activity. Thymidine 3',5'-disphosphate inhibits the spherical formation of WT and Alb/SND1 hepatocytes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Thymidine 3',5'-disphosphate (0.8 mg/kg or 1.6 mg/kg; i.p. or i.v.; twice a week for 4 weeks) significantly inhibits xenotransplantation of human hepatocellular carcinoma in WT B6/CBA mice[1]. Thymidine 3',5'-disphosphate (0.8, 0.16 and 0.32 mg/kg; s.c.; twice a week for 4 weeks) inhibits tumor proliferation, inflammatory reaction and the expression of tumor initiating cells (TIC) markers in adult male NSG mice. Thymidine 3',5'-disphosphate up-regulates the expression of apoptosis and selective tumor suppressor genes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nidhi Jariwala, et al. Oncogenic Role of SND1 in Development and Progression of Hepatocellular Carcinoma. Cancer Res. 2017 Jun 15;77(12):3306-3316.

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