

PRODUCT INFORMATION



Thymidine-5'-O-(α,β -methylene)diphosphate (sodium salt)

Item No. 38571

CAS Registry No.: 71370-60-0

Formal Name: 5'-[hydrogen (phosphonomethyl) phosphonate], thymidine, trisodium salt

Synonyms: α,β -Methylenethymidine diphosphate, α,β -MTDP, Thymidine-5'-O-methylenediphosphate, TMP-CP

MF: $C_{11}H_{15}N_2O_{10}P_2 \cdot 3Na$

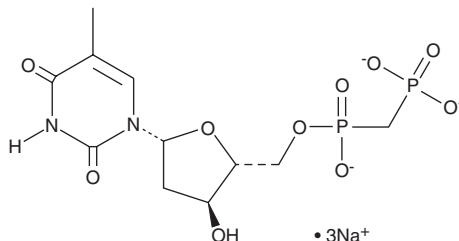
FW: 466.2

Purity: $\geq 95\%$

Supplied as: A solution in water

Storage: -80°C

Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Thymidine-5'-O-(α,β -methylene)diphosphate (TMP-CP) is a hydrolytically stable derivative of TDP and an inhibitor of thymidine kinase ($K_i = 23 \mu\text{M}$).^{1,2} It has been used as a precursor in the synthesis of α,β -methylene-2'-deoxythymidine 5'-triphosphate, a non-cleavable substrate for DNA polymerase.¹

References

1. Liang, F., Jain, N., Hutchens, T., *et al.* α,β -methylene-2'-deoxynucleoside 5'-triphosphates as noncleavable substrates for DNA polymerases: Isolation, characterization, and stability studies of novel 2'-deoxycyclonucleosides, 3,5'-cyclo-dG, and 2,5'-cyclo-dT. *J. Med. Chem.* **51**(2), 6460-6470 (2008).
2. Toide, H., Akiyoshi, H., Minato, Y., *et al.* Effect of thymidine and thymidylate analogs on nucleic acid synthesis in tumor cells. *Gan.* **68**(2), 159-163 (1977).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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