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Technical Information about 3'- Deoxythymidine (2‘,3‘-Dideoxythymidine (ddT))

Inhibitor of DNA polymerase ß and thymidine kinase

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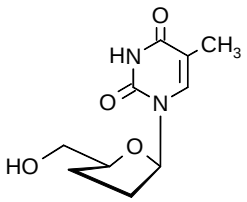

Abbreviation: **ddT**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{10}H_{14}N_2O_4$	[3416-05-5]	226.2	λ_{max} 267 nm / ε 9600 / pH7	D 040

Name: 3‘-Deoxythymidine. Since the term “thymidine“ already describes a 2‘-deoxy nucleoside, the name 2‘,3‘-deoxythymidine is not really correct. However, it is widely used, together with its corresponding abbreviation ddT.

Description: 3‘-Deoxythymidine is an analogue of the natural effector thymidine where the ribose hydroxy group in position 3‘ has been removed.

Specification: Crystallized or lyophilized solid. Please keep in mind that equal amounts of the compound may look different in volume. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube make sure that no substance is lost within the cap. Micro molar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 98% (HPLC / UV/ 267 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 3‘-Deoxythymidine has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be stored in the freezer.

Toxicity and Safety: Since thymidine has multiple tasks in every organism, it is very likely that thymidine analogs will interfere with many cell regulation processes in vivo. However, due to the rather small quantities to work with, no health hazards have been reported. Nevertheless please keep in mind, that the in vivo properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.
Our products are designed, developed and sold for research purposes only! They are intended for in vitro and nonhuman in vivo laboratory applications. Any other use requires approval of health authorities.
Not for drug, household or related uses!

References for 3‘-Deoxythymidine:

Yamanaka, K.; Hayashi, H.; Kato, K.; Hasegawa, A.; Oku, N.; Okada, S., *Biol. Pharm. Bull.*, **20**, 163 - 167 (1997): "DNA Single-Strand Breaks in L-132 Cells Resulting from Inhibition of Repair Polymerization Shortly after Exposure to Dimethylarsinic Acid"

Sutterluety, H.; Seiser, C., *J. Mol. Biol.*, **265**, 153 - 160 (1997): "Thymidine Inhibits the Growth-Arrest-Specific Degradation of Thymidine Kinase Protein in Transfected L Fibroblasts"

Suzuki, S.; Lee, B.; Luo, W.; Tovell, D.; Robins, M.J.; Tyrrell, D.L.J., *Biochem. Biophys. Res. Commun.*, **156**, 1144 - 1151 (1988): "Inhibition of Duck Hepatitis B Virus Replication by Purine 2',3'-Dideoxynucleosides"

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