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Troxacitabine Nucleotide Prodrug MIV-818

National Cancer Institute

Source

National Cancer Institute. *Troxacitabine Nucleotide Prodrug MIV-818*. NCI Thesaurus. Code C157496.

A liver-targeting nucleotide phosphoramidate prodrug of troxacitabine monophosphate (TRX-MP), a dioxolane derivative and L-configuration deoxycytidine analogue, with potential antineoplastic activity. Upon oral administration, MIV-818 is rapidly and specifically hydrolyzed in hepatocytes by liver carboxylesterase 1 (carboxylesterase 1, CE-1), generating high levels of the chain-terminating nucleotide, troxacitabine triphosphate (TRX-TP) in the liver. TRX-TP is then incorporated into tumor cell DNA, leading to termination of DNA synthesis and inhibition of tumor cell proliferation.