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2'-F-ara-deoxyuridine

National Cancer Institute

Source

National Cancer Institute. *2'-F-ara-deoxyuridine*. NCI Thesaurus. Code C80036.

A deoxyuridine prodrug with potential antineoplastic activity. Upon cellular uptake, 2'-F-ara-deoxyuridine (FAU) is phosphorylated by thymidine kinase to FAU monophosphate and subsequently methylated in the 5'-position by thymidylate synthase (TS) to its activated form, 1-(2-deoxy-2-fluoro-beta-D-arabinofuranosyl) 5-methyluracil monophosphate (FMAUMP). FMAUMP is incorporated into DNA leading to an inhibition of DNA synthesis and so cell growth. The catalytic activity of TS is critical to activation of FAU and subsequent incorporation into DNA. FAU may be beneficial in the case of tumors with high TS activity that are resistant to TS inhibitors.