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# Alpha-Folate Receptor-targeting Thymidylate Synthase Inhibitor ONX-0801

National Cancer Institute

## Source

National Cancer Institute. *alpha-Folate Receptor-targeting Thymidylate Synthase Inhibitor ONX-0801*. NCI Thesaurus. Code C120550.

An alpha-folate receptor (aFR)-mediated inhibitor of thymidylate synthase (TS), with potential antineoplastic activity. Upon intravenous infusion, ONX-0801 selectively targets and binds to aFR-expressing tumor cells. Upon uptake by aFR, this agent binds to and inhibits TS. This reduces thymine nucleotide synthesis, inhibits both DNA synthesis and cell division, and leads to tumor cell apoptosis. TS catalyzes the conversion of deoxyuridine monophosphate (dUMP) to deoxythymidine monophosphate (dTMP), an essential precursor for DNA synthesis, and plays a key role in cell growth and division. aFR, a cell-surface receptor glycoprotein, is overexpressed on various tumor cell types, but is minimally expressed by normal, healthy tissue.