

[Open Peer Review on Qeios](#)

Dideaza-5,6,7,8-Tetrahydrofolic Acid

National Cancer Institute

Source

National Cancer Institute. *Dideaza-5,6,7,8-Tetrahydrofolic Acid*. NCI Thesaurus. Code C39894.

An antimetabolite and folate analogue with anti-proliferative activity.

Dideazatetrahydrofolic acid inhibits activity of glycinamide ribonucleotide formyltransferase (GARFT), the first folate-dependent enzyme of the de novo purine synthesis pathway essential for cell proliferation. Enzyme inhibition reduces the purine nucleotides pool required for DNA replication and RNA transcription. As a result, this agent causes cell cycle arrest in S-phase, and ultimately inhibits tumor cell proliferation.