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DNA Minor Groove Binding Agent SG2000

National Cancer Institute

Source

National Cancer Institute. *DNA Minor Groove Binding Agent SG2000*. NCI Thesaurus. Code C29435.

A sequence-selective pyrrolobenzodiazepine (PBD) dimer with potential antineoplastic activity. Following intravenous administration, DNA minor groove binding agent SG2000 preferentially and covalently binds to purine-GATC-pyrimidine sequences, with the imine/carbinolamine moieties of SG2000 binding to the N2 positions of guanines on opposite strands of DNA. This induces interstrand cross-links and inhibits both DNA replication and gene transcription, which lead to the inhibition of cell growth. With a preference for binding to purine-GATC-pyrimidine sequences, SG2000 adducts do not appear to be susceptible to p53-mediated DNA excision repair.