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2-Deoxy-D-glucose

National Cancer Institute

Source

National Cancer Institute. *2-Deoxy-D-glucose*. NCI Thesaurus. Code C116618.

A non-metabolizable glucose analog in which the hydroxyl group at position 2 of glucose is replaced by hydrogen, with potential glycolysis inhibiting and antineoplastic activities. Although the exact mechanism of action has yet to be fully elucidated, upon administration of 2-deoxy-D-glucose (2-DG), this agent competes with glucose for uptake by proliferating cells, such as tumor cells. 2-DG inhibits the first step of glycolysis and therefore prevents cellular energy production, which may result in decreased tumor cell proliferation.