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# Vaccinia Virus DD-CDSR

National Cancer Institute

## Source

National Cancer Institute. *Vaccinia Virus DD-CDSR*. NCI Thesaurus. Code C74089.

A highly tumor-selective vaccinia virus (vv) with an engineered double deletion (DD) of the thymidine kinase (tk) and vaccinia growth factor genes and additions of both a cytosine deaminase (CD) gene and a somatostatin receptor (SR) gene with potential oncolytic viral activity. The tk and vaccinia growth factor gene deletions in intratumorally administered vaccinia virus (vDD-CDSR) help to restrict its replication and cytolytic activity to tumor cells with large nucleotide pools and tumor cells with activation of the EGFR-Ras pathway. Addition of the CD gene to the viral genome allows control of oncolytic viral infection through the administration of the prodrug 5-fluorocytosine (5-FC), converted by CD to the antimetabolite 5-fluorouracil (5-FU) in cells infected with this agent. Addition of the SR gene allows anatomical localization of vaccinia virus (vDD-CDSR) through the use of octreotide scintigraphy.