Ad-hCMV-TK

National Cancer Institute

Source

National Cancer Institute. Ad-hCMV-TK. NCI Thesaurus. Code C105811.

A human serotype 5, replication-defective, first generation adenoviral vector, with the viral E1a and E3 protein encoding regions deleted, which is engineered to express the herpes simplex virus thymidine kinase (HSV-tk) gene under the transcriptional control of the CMV promoter. This agent, when administered in conjunction with a synthetic acyclic guanosine analogue, possesses potential antineoplastic activity. Upon administration into the peritumoral region after tumor resection, adenoviral vector encoding HSV thymidine kinase is transduced into tumor cells, and HSV-tk is expressed. Tumor cells expressing HSV-tk are sensitive to synthetic acyclic guanosine analogues. Subsequent administration of a synthetic acyclic guanosine analogue, such as valacyclovir (VCV) or ganciclovir (GCV), kills the tumor cells expressing HSV-tk. The release of tumor-associated antigens (TAA) by dying tumor cells may then stimulate an antitumor cytotoxic T lymphocyte (CTL) response, directed aganst any remaining tumor cells.