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# Inodiftagene Vixteplasmid

National Cancer Institute

## Source

National Cancer Institute. *Inodiftagene Vixteplasmid*. NCI Thesaurus. Code C157333.

A recombinant DNA plasmid carrying the gene for diphtheria toxin-A (dT-A) chain under the regulation of the H19 promoter, with potential antineoplastic activity. Upon intravesical administration, dT-A chain expression is triggered by the presence of H19 transcription factors that are upregulated in tumor cells. The dT-A chain binds to nicotinamide adenine dinucleotide (NAD) and inactivates the ADP-ribosylation of elongation factor 2 (EF2), resulting in the inhibition of protein synthesis and cell death leading to tumor cell destruction. Inodiftagene Vixteplasmid does not carry the gene for the diphtheria toxin-B (dT-B) chain, thereby preventing the transfer of the toxic dT-A chain between cells. H19, a paternally imprinted, oncofetal gene, is highly expressed in embryonic and certain malignant tissues, but minimally expressed in normal, adult tissues.