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# CpG Oligodeoxynucleotide GNKG168

National Cancer Institute

## Source

National Cancer Institute. *CpG Oligodeoxynucleotide GNKG168*. NCI Thesaurus. Code C88342.

A synthetic, 21-mer, unmethylated CpG motif-based oligodeoxynucleotide (ODN), with immunostimulatory activity. CpG oligodeoxynucleotide GNKG168 binds to and activates Toll-like receptor 9 (TLR9) and is taken up into cells by endocytosis; once internalized, it may activate numerous signaling transduction pathways resulting in the release of multiple cytokines, such as immunoglobulins (Igs), interferons (IFNs), interleukins (ILs) and tumor necrosis factor (TNF). Through activation of TLR9, this ODN can directly stimulate B-lymphocytes, dendritic and natural killer (NK) cells, resulting in an increase in innate immunity and antibody-dependent cellular cytotoxicity (ADCC). In addition, through the release of IL-12 and IFN, this agent may induce a preferential shift to the T-helper 1 (Th1) phenotype resulting in enhanced CD8<sup>+</sup> T cell-mediated antitumor cytotoxicity.