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hTERT Multipeptide/Montanide ISA-51 VG/Imiquimod Vaccine GX 301

National Cancer Institute

Source

National Cancer Institute. *hTERT Multipeptide/Montanide ISA-51 VG/Imiquimod Vaccine GX 301*. NCI Thesaurus. Code C119616.

A therapeutic cancer vaccine consisting of four epitopes derived from the human telomerase reverse transcriptase (hTERT), the catalytic subunit of human telomerase, including hTERT (540-548) acetate, hTERT (611-626) acetate, hTERT (672-686) acetate and hTERT (766-780) acetate, emulsified individually in the adjuvant montanide ISA-51 VG and administered with the immune response modifier (IRM) imiquimod, with potential immunostimulating and antineoplastic activities. Each hTERT peptide emulsion is administered individually by intradermal injection. Subsequently, imiquimod is applied topically to the injection site(s). Vaccination with GX 301 may elicit a cytotoxic T-cell (CTL) response against telomerase-expressing tumor cells. Telomerase is expressed in the majority of human cancer cells, infrequently expressed in normal cells, and is directly linked to tumorigenesis. Imiquimod stimulates cytokine production through the activation of toll-like receptor 7 (TLR-7), and also exhibits antiproliferative effects. Montanide ISA-51, also known as incomplete Freund's adjuvant (IFA), is a stabilized water-in-oil emulsion containing mineral oil with mannide oleate, which contains vegetable-grade (VG) oleic acid derived from olive oil. ISA-51 non-specifically stimulates cell-mediated immune responses to antigens.