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MRNA-based TriMix Melanoma Vaccine ECI-006

National Cancer Institute

Source

National Cancer Institute. *mRNA-based TriMix Melanoma Vaccine ECI-006*. NCI Thesaurus. Code C154274.

A melanoma vaccine consisting of mRNAs encoding five different melanoma tumor-associated antigens (TAAs) and a TriMix platform comprised of three mRNAs encoding for constitutively activated toll-like receptor 4 (caTLR4), CD40 ligand (CD40L), and CD70, with potential immunomodulatory and antineoplastic activities. Upon intranodal injection, mRNA based TriMix vaccine ECI-006 may stimulate the immune system to mount both humoral and cellular responses against tumor cells expressing the five TAAs specific to the vaccine, potentially decreasing cellular proliferation of cells expressing these antigens. The TriMix adjuvants CD40L and caTLR4 promote the generation of mature and active dendritic cells (DCs), and CD70 provides a costimulatory signal to CD27+ naïve T-cells, thereby supporting T-cell proliferation and inhibiting T-cell apoptosis.