PD-L1 Peptide Vaccine

National Cancer Institute

Source

National Cancer Institute. PD-L1 Peptide Vaccine. NCI Thesaurus. Code C148146.

A vaccine composed of a peptide derived from the tumor-associated antigen (TAA) and immune checkpoint molecule programmed cell death-1 ligand 1 (PD-L1) combined with the immunoadjuvant montanide ISA-51, with potential immunomodulating and antineoplastic activities. Vaccination with PD-L1 peptide vaccine may activate the immune system to induce an immune response against PD-L1-expressing cells. This may increase and restore the proliferation and activation of various immune cells, including cytotoxic T-lymphocytes (CTLs), and may eradicate PD-L1-expressing tumor cells. PD-L1 is overexpressed on many human cancer cell types as well as on antigen presenting cells (APCs) and immunosuppressive cells in the tumor micro-environment (TME), such as regulatory T-cells (Tregs). PD-L1 binding to its cognate receptor programmed cell death protein 1 (PD-1; PDCD1; CD279) on T-cells suppresses the immune system and results in increased immune evasion and decreased CTL activation. Montanide ISA-51, also known as incomplete Freund's adjuvant or IFA, is a stabilized water-in-oil emulsion adjuvant containing mineral oil with mannide oleate added as a surfactant that non-specifically stimulates cell-mediated immune responses to antigens.