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Indoleamine 2,3-dioxygenase Peptide Vaccine

National Cancer Institute

Source

National Cancer Institute. *Indoleamine 2,3-dioxygenase Peptide Vaccine*. NCI Thesaurus. Code C94215.

A peptide vaccine against the immunomodulatory enzyme indoleamine 2,3-dioxygenase (IDO), with potential immunomodulating and antineoplastic activities. Vaccination with indoleamine 2,3-dioxygenase peptide vaccine may activate the immune system to induce an immune response against IDO-expressing cells. This may increase and restore the proliferation and activation of various immune cells, including dendritic cells (DCs), natural killer (NK) cells, and T-lymphocytes, and may eradicate IDO-expressing tumor cells. IDO, a cytosolic enzyme responsible for tryptophan catabolism and conversion of tryptophan into kynurenine, is overexpressed by a variety of tumor cell types and antigen presenting cells (APCs) and plays an important role in immunosuppression; Tryptophan depletion inhibits T-lymphocyte proliferation and activation, and suppresses the immune system.