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PSA/PSMA DNA Plasmid INO-5150

National Cancer Institute

Source

National Cancer Institute. *PSA/PSMA DNA Plasmid INO-5150*. NCI Thesaurus. Code C123283.

A plasmid DNA vaccine encoding the tumor-associated antigens (TAAs) prostate-specific antigen (PSA) and prostate-specific membrane antigen (PSMA), with potential immunoactivating and antineoplastic activities. Upon intramuscular delivery and electroporation of the PSA/PSMA DNA plasmid INO-5150, both PSA and PSMA are translated in cells which then activate the immune system. This induces cytotoxic T-lymphocyte (CTL) responses against tumor cells expressing PSA and PSMA. This may result in both immune-mediated tumor cell death and the inhibition of tumor cell proliferation. PSA and PSMA are overexpressed on a variety of cancer cell types. The DNA encoding the TAAs in INO-5150 is based on both human and other primate antigen gene sequences. As the plasmid genes differ from the human gene sequences encoding these antigens, INO-5150 may overcome immune tolerance to human TAAs.