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3'-Aminomethyl Nicotine-P. aeruginosa r-Exoprotein A Conjugate Vaccine

National Cancer Institute

Source

National Cancer Institute. *3'-Aminomethyl Nicotine-P. aeruginosa r-Exoprotein A Conjugate Vaccine*. NCI Thesaurus. Code C88341.

A hapten-carrier immunoconjugate composed of the hapten trans-3'-aminomethyl nicotine conjugated to a recombinant P. aeruginosa exoprotein A, rendered nontoxic through amino acid depletion, with potential immunostimulating activity. Upon vaccination with 3'-aminomethyl nicotine-P. aeruginosa r-exoprotein A conjugate vaccine, the immune system may produce anti-nicotine antibodies. Antibody-bound nicotine cannot pass the blood brain barrier (BBB) to activate brain nicotine receptors. Nicotine, a small organic molecule that is not immunogenic, must be haptenized and conjugated to a carrier protein, such as nontoxic recombinant P. aeruginosa exoprotein A, to induce an antibody response. Aluminium hydroxide may be used as an adjuvant for this vaccine.