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Recombinant B. pertussis Adenylate Cyclase Toxin-Tyrosinase A2 Epitope Vaccine

National Cancer Institute

Source

National Cancer Institute. *Recombinant B. pertussis Adenylate Cyclase Toxin-Tyrosinase A2 Epitope Vaccine*. NCI Thesaurus. Code C96735.

A recombinant vaccine containing a genetically detoxified adenylate cyclase toxin (CyaA) of *Bordetella pertussis* coupled, through its catalytic site, to the melanoma tyrosinase A2 epitope YMDGTMSQV, with potential antineoplastic activity. Via the toxin moiety, the recombinant B. pertussis adenylate cyclase toxin-tyrosinase A2 epitope specifically binds to the alphaMbeta2 integrin (CD11b/CD18) located on CD11b-positive antigen-presenting cells (APC). Upon processing and presentation of the melanoma-specific epitope by MHC class I molecules to the surface of these APCs, a specific cytotoxic T-cell (CTL) response against tumor cells expressing tyrosinase may be initiated, resulting in decreased tumor growth and cell lysis.