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(54) Title: CONSTRUCTING A DNA CHIMERA FOR VACCINE DEVELOPMENT AGAINST LEISHMANIASIS AND TUBERCULOSIS

(57) Abstract: This invention relates to a novel recombinant chimera of DNA construct having esat-6 region of Mycobacterium tuberculosis and kinesin region of Leishmania donovani cloned together on two sides of self cleaving peptide in a DNA vaccine vector pVAX-1 wherein the Chimeric construct is operatively linked to a transcriptional promoter thus capable of self replication and expression within the mammalian cell and the process of preparation thereof comprising. Analysis of the predicted protein sequence of kinesin motor domain and esat-6 domain using Promiscuous MHC Class-1 Binding Peptide Prediction Servers. Amplification of gene coding for kinesin motor domain and esat-6 domain. Cloning of kinesin esat-6 gene region in pGEM-T® vector for sequence analysis. Generation of Chimeric construct by directional cloning in pVAX-1 vector. In-vitro expression analysis of kinesin motor domain and esat-6 domain from the clones using cell free translation system and immunogenicity studies, Splenocyte proliferative and cytokines studies using the above mentioned constructs.



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