

題名:如何對抗SARS

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摘要:The current DNA vaccine formulations are not optimal for stimulation of CD8(+) T cells, which are required for clearing virally-infected cells. Here we show that CD8(+) T cell-stimulating activity can be effectively augmented by combining DNA vaccination with protein transfer. C57BL/6 mice were injected intramuscularly with an anti-SARS-CoV DNA vaccine admixed with a lipid-derived conjugate of 4-1BBL, a potential CD8(+) T-cell co-stimulator. The inclusion of the lipidated co-stimulator greatly enhanced cellular immune responses, especially the CTL response, induced by the DNA vaccine. The adjuvant effect of 4-1BBL was lipidation-dependent, indicating that it functions as a cell membrane-anchored co-stimulator. Results of our study suggest, for the first time, that muscle cells may be modified in situ, at the DNA injection site, into APC-like cells to allow direct priming of CD8(+) T cells and thereby improve the efficacy of DNA vaccines.