

Discovery of a self-assembly and self-adjuvant lipopeptide as a saccharide-free peptide vaccine targeting EGFRvIII positive cutaneous melanoma

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The primer sequences for RT-PCR:

wtEGFR:

Sense: 5'-TCCTTGGAATTTGGAAATT-3';

Antisense: 5'-GGCATAGGAATTTTCGTAGTACAT-3';

EGFRvIII:

Sense: 5'-GTATTGATCGGGAGAGCCG-3';

Antisense: 5'-GTGGAG ATCGCCACTGATG-3';

β -actin:

Sense: 5'-CAAGAGATGGCCACGGCTGCT-3';

Antisense: 5'-TCCTTCTGCATCCTGTCGGCA-3'.

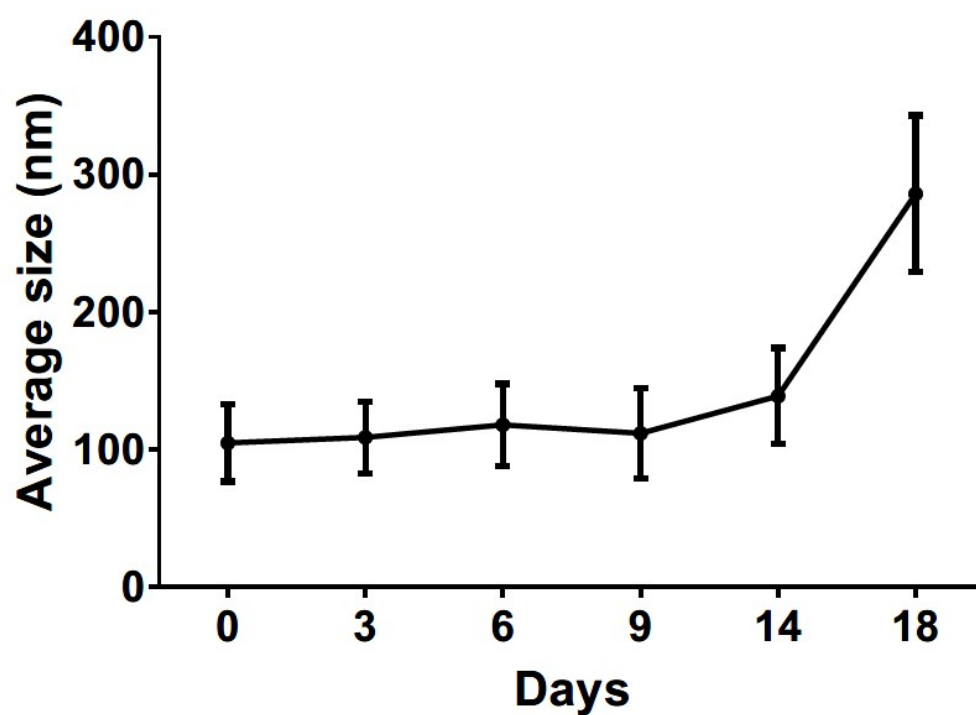


Figure S1. The change on size distribution of Chol-V2 micelles when storage at 4°C for 18 days.

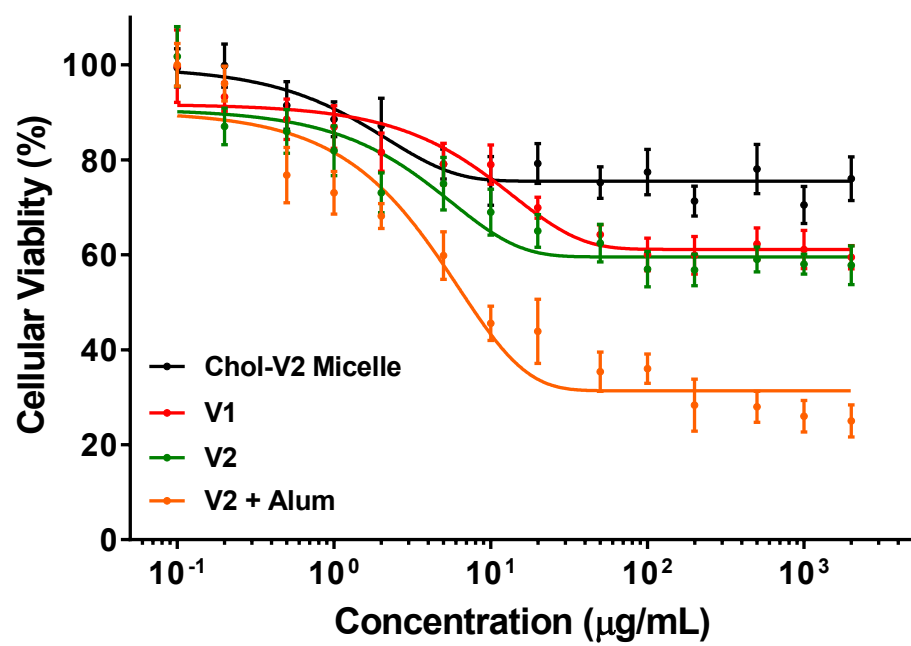


Figure S2. The cytotoxicity assay of Chol-V2 micelle, V1, V2 and V2 plus alum on RAW264.7 murine macrophage.

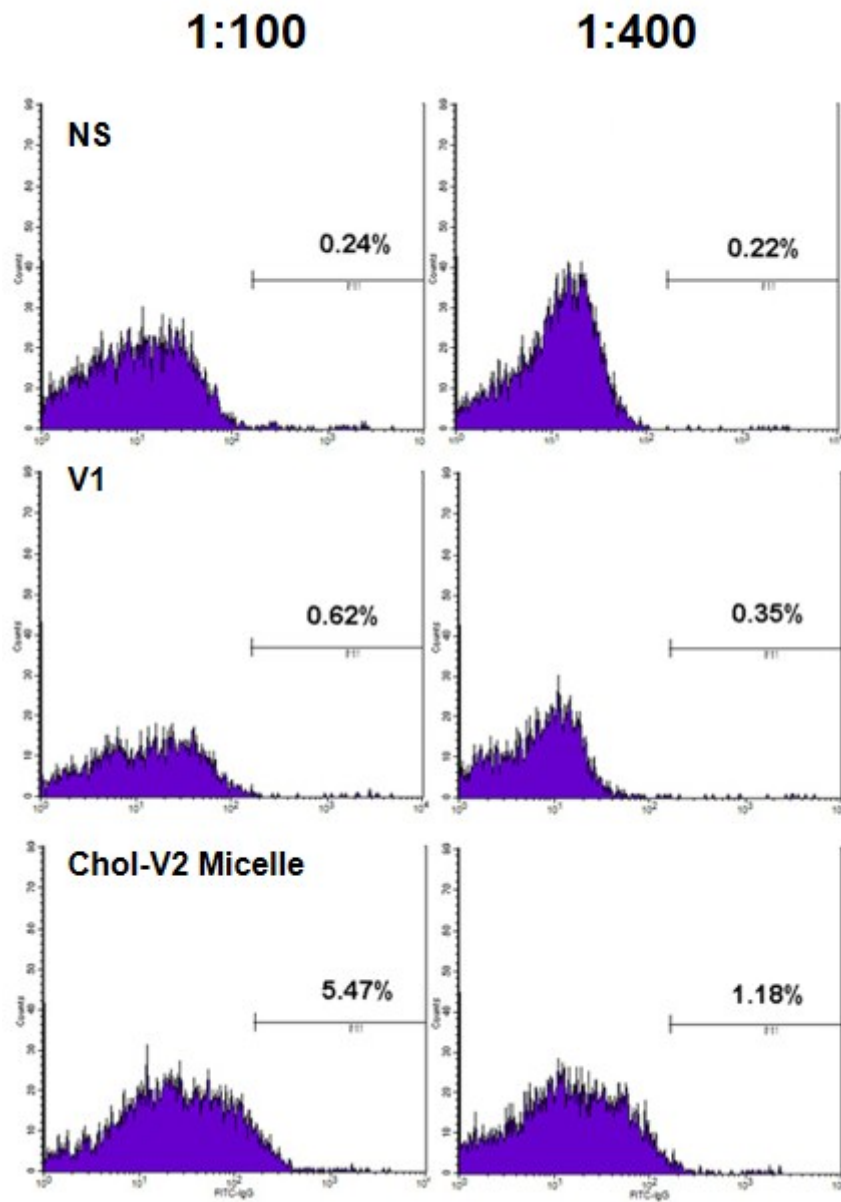


Figure S3. FACS analysis of neutralizing antibody against EGFRvIII-B16 cells.

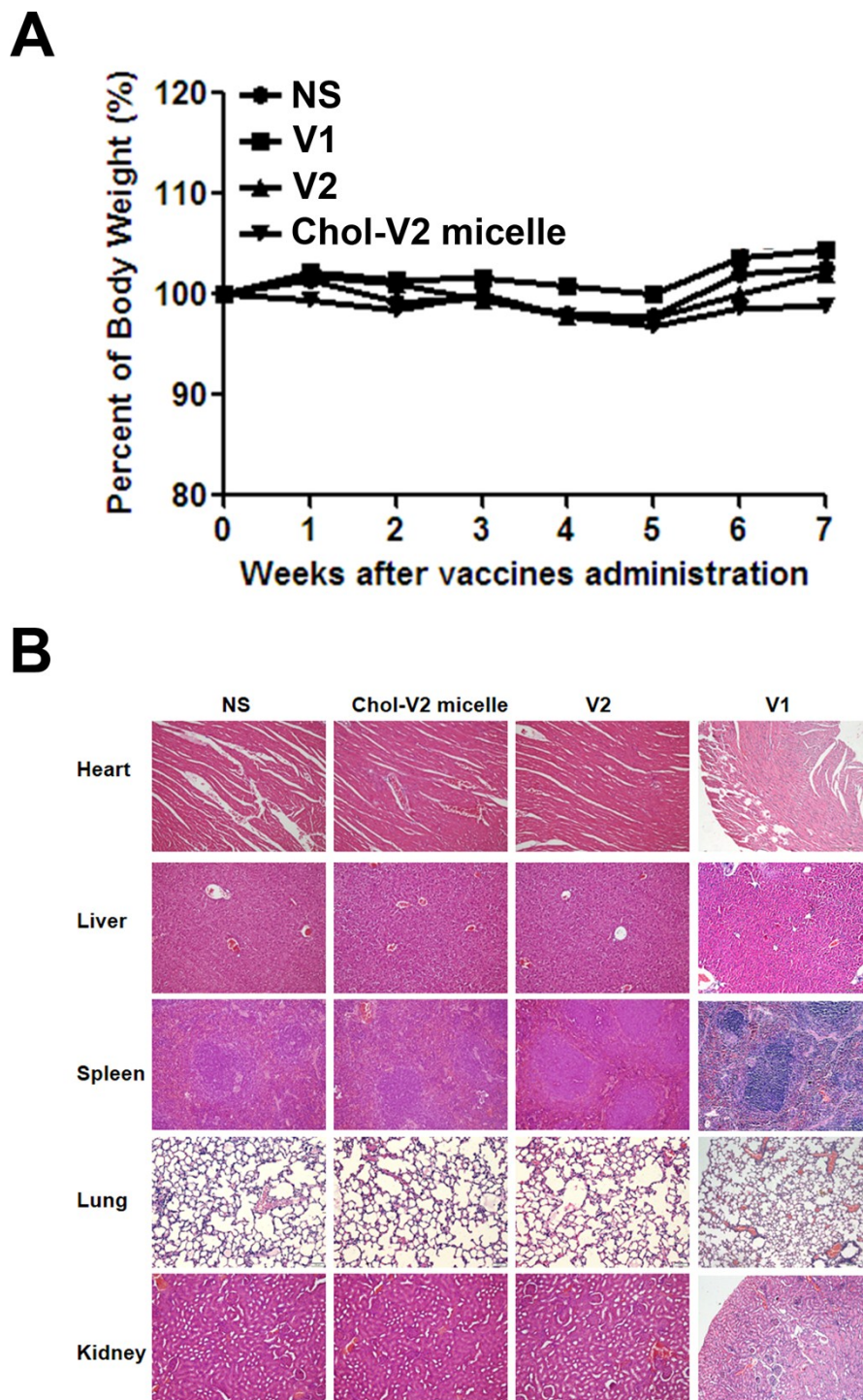


Figure S4. Preliminary safety evaluation of Chol-V2 micelles as vaccines. (A) Body weight of mice; (B) Representative images of main organ tissues after staining with hematoxylin-eosin.

Mass spectra results of peptide vaccines:

V2: aK-Cha-VAaWTLKAa-LEEKKGNVVTDH

[M+4H]⁴⁺ calcd.: 699.81; found:699.87

V3: QYIKANSKFIGITE-LEEKKGNVVTDH

[M+4H]⁴⁺ calcd.: 782.14; found: 782.08

V4: FNNFTVSFWLRVPKVSASHLELEEKKGNVVTDH

[M+5H]⁵⁺ calcd.: 799.31; found:799.26

V5: AYNFVESIINLFQVVHNSYNLEEKKGNVVTDH

[M+5H]⁵⁺ calcd.: 777.87; found:777.93

V6: LEEKKGNVVTDH

[M+2H]²⁺ calcd.: 766.35; found:766.38

Chol-V2: Chol-suc-aK-Cha-VAaWTLKAa-LEEKKGNVVTDH

[M+5H]⁵⁺ calcd.: 652.71; found:652.69

HPLC spectrum of peptide vaccines:

