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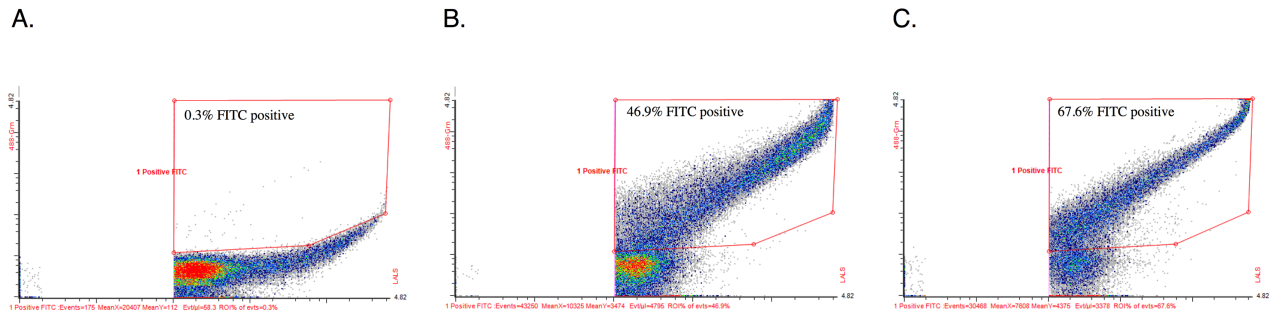
Supplemental Information

Personalized Cancer Vaccine Platform for Clinically Relevant Oncolytic Enveloped Viruses

Erkko Ylösmäki, Cristina Malorzo, Cristian Capasso, Oona Honkasalo, Manlio Fusciello, Beatriz Martins, Leena Ylösmäki, Antti Louna, Sara Feola, Henrik Paavilainen, Karita Peltonen, Veijo Hukkanen, Tapani Viitala, and Vincenzo Cerullo



Supplementary figure 1. Anti-tumour peptides can be readily attached onto the lipid envelope of enveloped viruses using either cholesterol- or cell penetrating peptide moieties as an anchor. Micro flow cytometric detection of purified PeptiENV viruses complexed with CPP Tat or cholesterol -conjugated FITC-labelled anti-tumour peptides. A) Naked VACV was used as a negative control in flow cytometry for FITC detection. B) Cholesterol-conjugated and FITC labelled peptides were complexed with VACV and purified with 36% sucrose bed purification before flow cytometric detection of FITC signal from the complex. C) Cell penetrating peptide-conjugated and FITC labelled peptides were complexed with VACV and purified with 36% sucrose bed purification before flow cytometric detection of FITC signal from the complex.

Supplementary Materials

Flow cytometry for viruses

$5x10^7$ PFU of VACV particles were complexed with 24ug of either CPP-peptide-FITC or cholesterol-conjugated peptide-FITC in 200ul of DMEM for 15 min at 37 ºC. After complexation, unbound peptides were removed by ultracentrifugation (20 000g, 50 min) through 36% sucrose cushion in 1mM Tris (pH 9.0) and eluted to 2% formalin in PBS. After fixing, formalin was removed with another ultracentrifugation (20 000g, 50 min) through 36% sucrose cushion and pellet was eluted to 1x ultrapure PBS (Gibco). Flow cytometry was performed with Apogee A50 Micro Flow Cytometer (Apogee) and FITC detection was used for assessing the complexes.