

## PSMA-homing dsRNA chimeric protein vector kills prostate cancer cells and activates anti-tumor bystander responses

### Supplementary Material

#### DNA and protein sequences of A. GFP-SCP and B. dsRB-SCP

##### A.

GFP-SCP DNA sequence: (b.p=1554)

```
ATGGGCAGCAGCCATCATCATCATCACAGCAGCGGCCTGGTGCCGCGCGGCAGCCATAT
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ACGTAACCGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAG
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ACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCCGACCACATGAAGCAGCAGCAGCTTC
TTCAAGTCCAGTACAGCCATGCCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGC
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ACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAAGTCAAG
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CATCGGCGCAGCGCCCGTGTGCTGCTGCCGACAACCACTACCTGAGCACCCAGTCCGCCCTGAG
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GFP-SCP protein sequence: (AA=516, MW=56823.4)

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SVQLADHYQQNTPIGDGPVLLPDNHVLSQTSALSKDPNEKRDMVLLFEVTAAGITLGMDELYKK
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WIGNINPNNGGTTYNQKFEKATLTVDKSSSTAYMELRSLTSEDSAVYYCAAGWNFDYWGQGT
VTVSSGGGGSGGGGSGGGSDIVMTQSHKFMSTSVGDRVSIICKASQDVGTAVDWYQKPKQSP
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##### B.

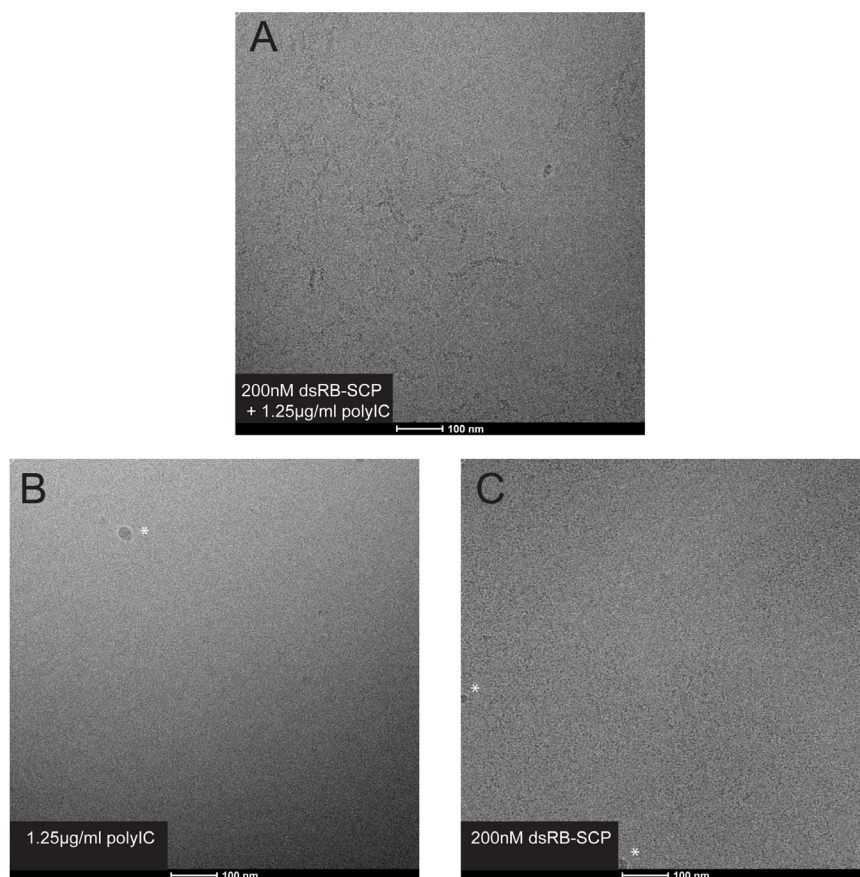
dsRB-SCP DNA sequence: (b.p=1338)

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GCATGGGCCAGAAGGATTTTATTATAAATGCAAAATGGGACAGAAAAGAAATATAGTATTGGTA
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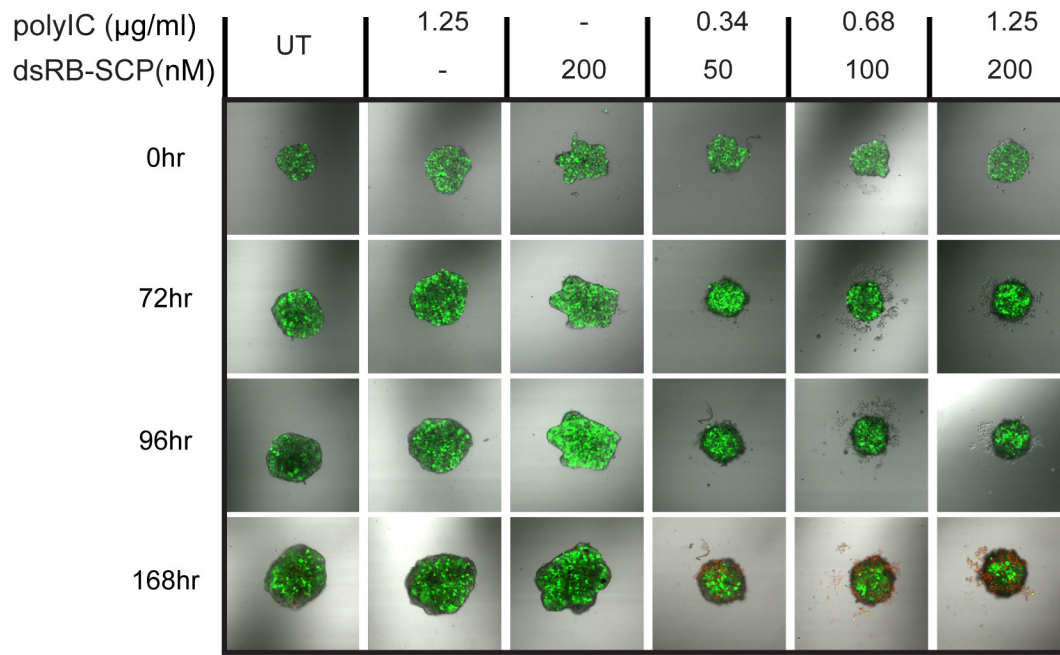
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 AGAAGTTCGAGGACAAGGCCACATTGACTGTAGACAAGTCCTCCAGTACAGCCTACATGGAG  
 CTCCGCAGCCTAACATCTGAGGATTCTGCAGTCTATTATTGTGCAGCTGGTTGGAACCTTGACT  
 ACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGTGGATCAGGTGGAGGTGGA  
 TCTGGTGGAGGTGGATCTGACATTGTGATGACCCAGTCTCACAAATTCATGTCCACATCAGTA  
 GGAGACAGGGTTCAGCATCATCTGTAAGGCCAGTCAAGATGTGGGTACTGCTGTAGACTGGTA  
 TCAACAGAAACCAGGACAATCTCCTAAACTACTGATTTATTGGGCATCCACTCGGCACACTGG  
 AGTCCCTGATCGCTTACAGGCAGTGGATCTGGGACAGACTTCACTCTCACCATTACTAATGT  
 TCAGTCTGAAGACTTGGCAGATTATTTCTGTGACAAATAACAGCTATCCCCTCACGTTCCGGT  
 GCTGGGACCATGCTGGACCTGAAA

dsRB-SCP protein sequence: (AA=446, MW=48614.3)

MGSSHHHHHSSGLVPRGSHMMAGDLSAGFFMEELNTYRQKQGVVLKYQELPNSGPPHRRFTF  
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 KKRLTVNIEQCASGVHGPFGFHYKCKMGQKEYSIGTGSTKQEAQLAAKLAYLQILSES GGGGS  
 RRRRRRRRGRKASAEVQLQQSGPELVKPGTSVRISCKTSGYTFTEYTIHWVKQSHGKSLEWIGNIN  
 PNNGGTTYNQKFEDKATLTVDKSSSTAYMELRSLTSEDSAVYYCAAGWNFDYWGQGTTVTVSS  
 GGGGSGGGGSGGGGSDIVMTQSHKFMSTSVGDRVSIICKASQDVGTAVDWYQQKPGQSPKLLIY  
 WASTRHTGVPDRFTGSGSGTDFLTITNVQSEDLADYFCQQYNSYPLTFGAGTMLDLK



**Supplementary Figure 1: Direct imaging of dsRB-SCP/polyIC complex by cryogenic transmission electron microscopy (cryo-TEM).** A. The dsRB-SCP/polyIC complexes are visualized as chains of beads on elongated filaments, which are about  $114.8 \pm 34.4$  nm in length (mean length) and  $8.2 \pm 3.2$  nm wide (mean width) ( $n=20$ , measurements were done using ImageJ software). B. PolyIC alone is barely visible as extremely thin threads. C. dsRB-SCP alone is dispersed as tiny dots all over the grid. Asterisks indicate ice on the grid.



**Supplementary Figure 2: Complete time course of treatment with dsRB-SCP/polyIC of LNCaP-Luc/GFP spheroids in the absence of PBMCs.** The endpoints only (168 h) are also shown in Figure 6, lower panel. Refer to Figure 6 for detailed description.