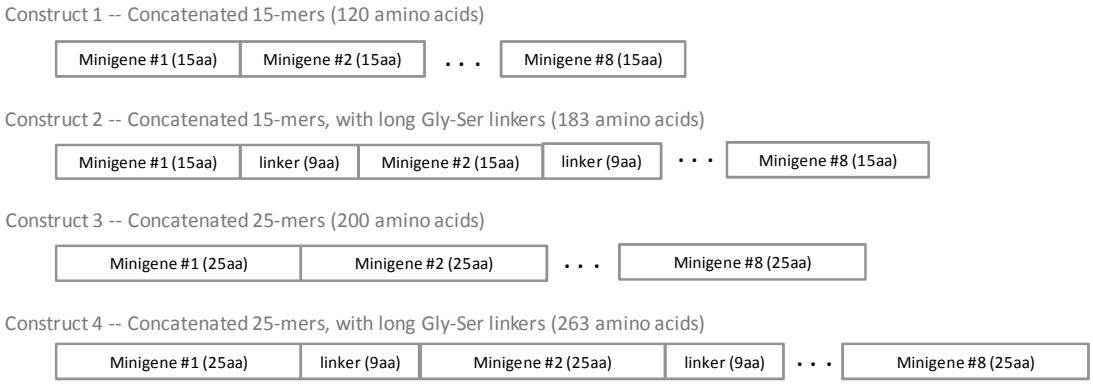


Figure 1

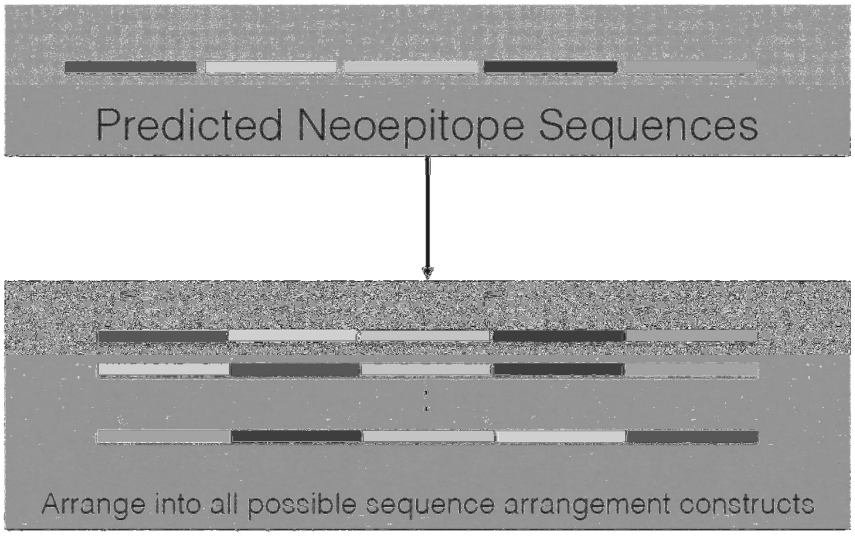
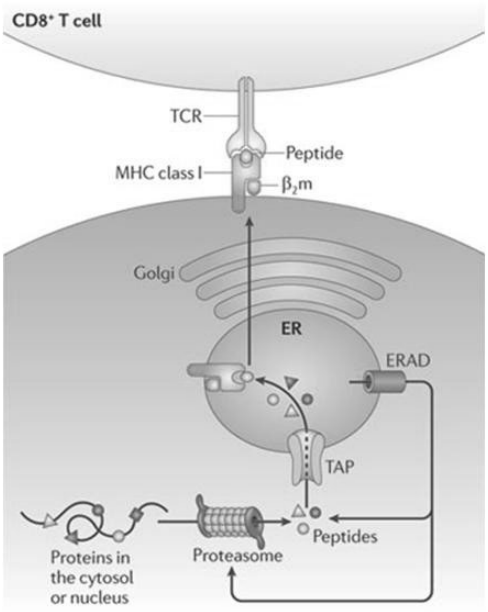
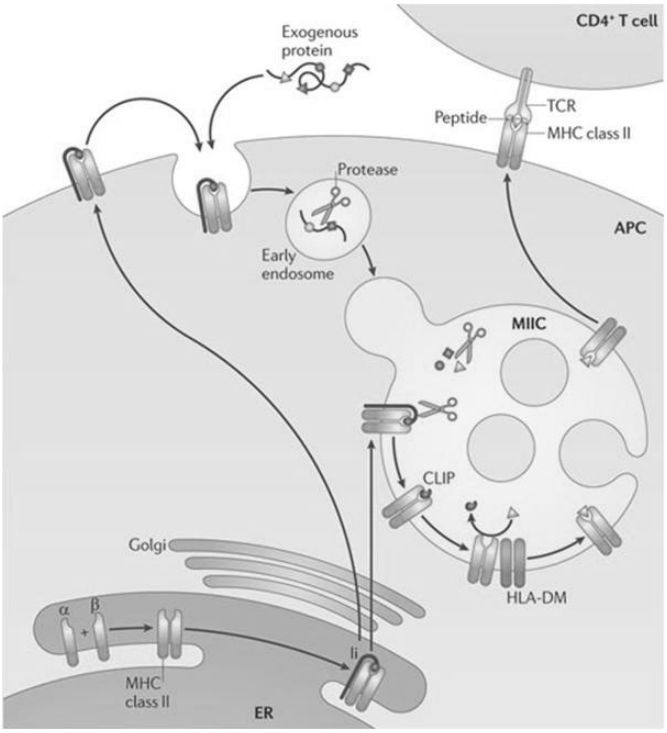


Figure 2



Prior Art Figure 3



Prior Art Figure 4

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WCISILVELTRLEGAAAAYYTVFDRDNNRVSFANAVVLAAAAHSGLVTFQAFIDVMSRETTDTD
TADAAAALDLAALEDVSANCLTETLEDKNEGVAAAAVLSFVGQTRVLMINGEEVEETELMGAAA
AEVSGLEQLESIINFEKLTEWTSSNVAAAA*MTEQQWNFAGIEAAASAIQGNVTSIHSLLD*AAAA**E**
QKLISEEDL **(SEQ ID NO.: 4)**

Figure 5A

MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQKESTLHLVLRL
*RGGR*DKITQYEKSLYYCSFLEALVRDVCIAAAACVDCLDRTNTAQVMVGKCALAYQLYAAAAVV
KAYLPVNESFAFTADLRSNTGGQAAAANILAVSFAPLVQLSKNDNGTPDSVGAAAAQSNYQHIT
NFEWCISILVELTRLEGAAAAYYTVFDRDNNRVSFANAVVLAAAAHSGLVTFQAFIDVMSRETT
DTDTADAAAALDLAALEDVSANCLTETLEDKNEGVAAAAVLSFVGQTRVLMINGEEVEETELMG
AAAAEVSGLEQLESIINFEKLTEWTSSNVAAAA*MTEQQWNFAGIEAAASAIQGNVTSIHSLLD*AA
AA**EQKLISEEDL** **(SEQ ID NO.: 5)**

Figure 5B

MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQKESTLHLVLRL
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EGAAAAYYTVFDRDNNRVSFANAVVLAAAAHSGLVTFQAFIDVMSRETTDTDTADAAAALDLAALEDVSA
NCLTETLEDKNEGVAAAAVLSFVGQTRVLMINGEEVEETELMGAAAAEVSGLEQLESIINFEKLTEWTSSN
VAAAA*MTEQQWNFAGIEAAASAIQGNVTSIHSLLD*AAAA**EQKLISEEDL** **(SEQ ID NO.: 6)**

Figure 5C

MLLLPFQLLAVLFPGGNSEDKITQYEKSLYYCSFLEALVRDVCIGPGPGCVDCLDRTNTAQVMVGKCALA
YQLYGPGPGVVKAYLPVNESFAFTADLRSNTGGQGPGPGNILAVSFAPLVQLSKNDNGTPDSVGGPGP
GQSNYQHITNFEWCISILVELTRLEGGPGPGYYTVFDRDNNRVSFANAVVLGPGPGHSGLVTFQAFIDVM
SRETTDTDTADGPGPGLDLAALEDVSANCLTETLEDKNEGVGPGPGVLSFVGQTRVLMINGEEVEETEL
MGGPGPGEVSGLEQLESIINFEKLTEWTSSNVGGPGPGMTEQQWNFAGIEAAASAIQGNVTSIHSLLD*DY
KDDDDKGSDYKDHDGDYKDHDI***MLIPIAVGGALAGLVLIVLIAYLIGRKRSHAGYQTI**

(SEQ ID NO.: 10)

Figure 6A

MLLLPFQLLAVLFPGGNSEDKITQYEKSLYYCSFLEALVRDVCIGPGPGCVDCLDRTNTAQVMVGKCALAYQLYGPG
PGVVKAYLPVNESFAFTADLRSNTGGQGPGPGNILAVSFAPLVQLSKNDNGTPDSVGGPGPGQSNYQHITNFEWCIS
ILVELTRLEGGPGPGYYTVFDRDNNRVSFANAVVLGPGPGHSGLVTFQAFIDVMSRETTDTDTADGPGPGLDLAALE
DVSANCLTETLEDKNEGVGPGPGVLSFVGQTRVLMINGEEVEETELMGGPGPGEVSGLEQLESIINFEKLTEWTSSN
VGGPGPGMTEQQWNFAGIEAAASAIQGNVTSIHSLLD*DYKDDDDKGSDYKDHDGDYKDHDI***MLIPIAVGGALAGLVL
IVLIAYLIG***RKRCFC***

(SEQ ID NO.: 11)

Figure 6B

MLLLPFQLLAVLFPGGNSEDKITQYEKSLYYCSFLEALVRDVCIGPGPGCVDCLDRTNTAQVMVGKCALA
YQLYGPGPGVVKAYLPVNESFAFTADLRSNTGGQGPGPGNILAVSFAPLVQLSKNDNGTPDSVGGPGP
GQSNYQHITNFEWCISILVELTRLEGGPGPGYYTVFDRDNNRVSFANAVVLGPGPGHSGLVTFQAFIDVM
SRETTDTDTADGPGPGLDLAALEDVSANCLTETLEDKNEGVGPGPGVLSFVGQTRVLMINGEEVEETEL
MGGPGPGEVSGLEQLESIINFEKLTEWTSSNVGGPGPGMTEQQWNFAGIEAAASAIQGNVTSIHSLLD*DY
KDDDDKGSDYKDHDGDYKDHDI***MLIPIAVGGALAGLVLIVLIAYLIG***KKHCSYQDIL***

(SEQ ID NO.: 12)

Figure 6C

MLLLPFQLLAVLFPGGNSEALQAYHLDPQCWGVNVQPYSGSPANVAVYTALVEPHGRIMGLD
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VYGPGPGRRYLLQNTALEVFMANRTSVMFNFPEQATVKKVVYSLPRVGVGTSYGLPQAGPGP
GKIEPDMMSMEHSFETASHDGEAGPSPEVLQGPGPGKVLMASTSYLPSQVTEMFNQGRAFA
AVRLPFCGHKNICSLTTIQKIPRLLVGPGPGMPAAELALSAFLVLVFLWVHSLRRLLECFYVSVF
SNAAIHVVQYCFGLVYYGPGPGLLELLHCPLGHCHLCSEPMFTFVYPTIFPLRETPMAGLHQRR
TSIGFVAYCGPGPGAHFRLVSKEKMPWDSIKLTFEATGPRHMSFYVRTHKGSTLSQWSLGNGI
PVGPGPGGRTQQMLIPAWQQVTPMAPAAATLTFEGMAGSQRLGDWGKMIPHSNHYNSVGP
GPGELQLVQLEGGGGSGTYRVGNAQPSLADCLDAGDLAQRLREHGAEVPTEPKEGPGPGEL
EKFRKSEEGKQRAAAPSAASSPADVQSLKKAMSSLQNDRDRLLKELKNLGPGPGGKHDRDLLI
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AAVLPNPIPNPEICYNKLFINNEWHDAVGPGPGEVSGLEQLESIINFEKLTEWTSSNVGGPGPG
MTEQQWNFAGIEAAASAIQGNVTSIHSLLD*DYKDDDDKGSDYKDHDGDYKDHD***IMLIPIAVGG**
ALAGLVLIVLIAYLIGRKRSHAGYQTI

(SEQ ID NO.: 16)

Figure 7A

MLLLPFQLLAVLFPGGNSEALQAYHLDPQCWGVNVQPYSGSPANVAVYTALVEPHGRIMGLDLPDGGH
LTGPGPGDTDEAEDPEKMLANFESGKHKYRQTAMFTATMPPAVERLARSYLRRPAVVYGPGPGRRYLL
QNTALEVFMANRTSVMFNFPEQATVKKVVYSLPRVGVGTSYGLPQAGPGPGKIEPDMMSMEHSFETAS
HDGEAGPSPEVLQGPGPGKVLMASTSYLPSQVTEMFNQGRAFAAVRLPFCGHKNICSLTTIQKIPRLLVG
PGPGMPAAELALSAFLVLVFLWVHSLRRLLECFYVSVFSNAAIHVVQYCFGLVYYGPGPGLLELLHCPLG
HCHLCSEPMFTFVYPTIFPLRETPMAGLHQRRTSIGFVAYCGPGPGAHFRLVSKEKMPWDSIKLTFEATG
PRHMSFYVRTHKGSTLSQWSLGNGIPVGPGPGGRTQQMLIPAWQQVTPMAPAAATLTFEGMAGSQRL
GDWGKMIPHSNHYNSVGPGPGELQLVQLEGGGGSGTYRVGNAQPSLADCLDAGDLAQRLREHGAEVP
TEPKEGPGPGELEKFRKSEEGKQRAAAPSAASSPADVQSLKKAMSSLQNDRDRLLKELKNLGPGPGGK
HDRDLLIGTAKHGLNRTDYYIMNGPQLSFLDAYRNYAQHKRTDTQAPGSGPGPGILEVDKSGPITLLVQG
HMEGEVWGLSTHPYLPICATVSDDKTLRIWDLSPSGPGPGMLTARLLLPRLLCLQGRTTSYSTAAVLPNPI
PNPEICYNKLFINNEWHDAVGPGPGEVSGLEQLESIINFEKLTEWTSSNVGGPGPGMTEQQWNFAGIEA
AASAIQGNVTSIHSLLD*DYKDDDDKGSDYKDHDGDYKDHD***IMLIPIAVGGALAGLVLIVLIAYLIG***RKRCFC***

(SEQ ID NO.: 17)

Figure 7B

MLLLPFQLLAVLFPGGNSEALQAYHLDPQCWGVNVQPYSGSPANVAVYTALVEPHGRIMGLDLPDGGH
LTGPGPGDTDEAEDPEKMLANFESGKHKYRQTAMFTATMPPAVERLARSYLRRPAVVYGPGPGRRYLL
QNTALEVFMANRTSVMFNFPEQATVKKVVYSLPRVGVGTSYGLPQAGPGPGKIEPDMMSMEHSFETAS
HDGEAGPSPEVLQGPGPGKVLMASTSYLPSQVTEMFNQGRAFAAVRLPFCGHKNICSLTTIQKIPRLLVG
PGPGMPAAELALSAFLVLVFLWVHSLRRLLECFYVSVFSNAAIHVVQYCFGLVYYGPGPGLLELLHCPLG
HCHLCSEPMFTFVYPTIFPLRETPMAGLHQRRTSIGFVAYCGPGPGAHFRLVSKEKMPWDSIKLTFEATG
PRHMSFYVRTHKGSTLSQWSLGNGIPVGPGPGGRTQQMLIPAWQQVTPMAPAAATLTFEGMAGSQRL
GDWGKMIPHSNHYNSVGPGPGELQLVQLEGGGGSGTYRVGNAQPSLADCLDAGDLAQRLREHGAEVP
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HMEGEVWGLSTHPYLPICATVSDDKTLRIWDLSPSGPGPGMLTARLLLPRLLCLQGRTTSYSTAAVLPNPI
PNPEICYNKLFINNEWHDAVGPGPGEVSGLEQLESIINFEKLTEWTSSNVGGPGPGMTEQQWNFAGIEA
AASAIQGNVTSIHSLLD*DYKDDDDKGSDYKDHDGDYKDHD***IMLIPIAVGGALAGLVLIVLIAYLIG***KKHCSY***
QDIL

(SEQ ID NO.: 18)

Figure 7C

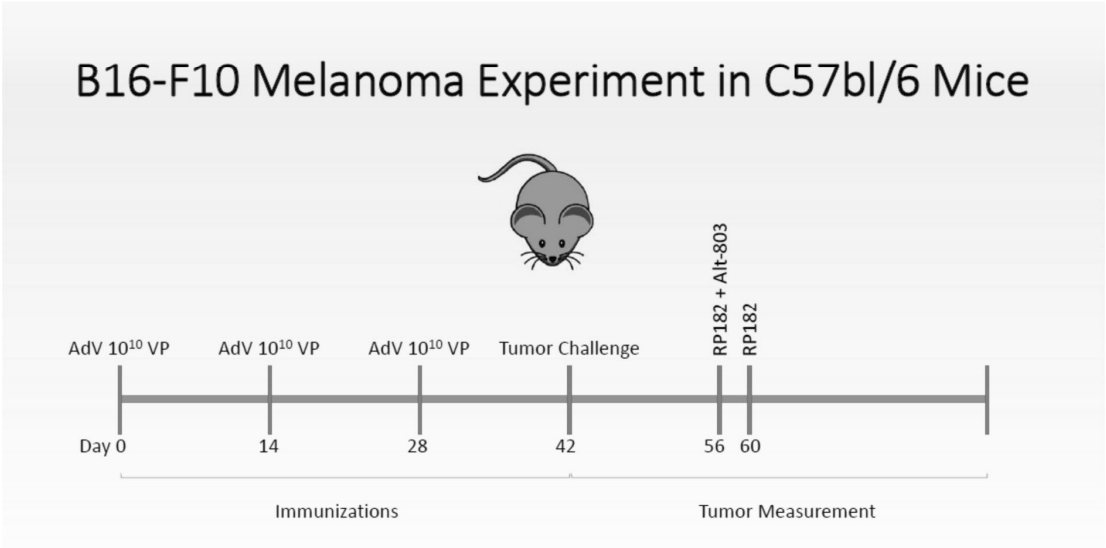

B16-F10 Melanoma Experiment in C57bl/6 Mice
AdV 10^10 VP
AdV 10^10 VP
AdV 10^10 VP
Tumor Challenge
RP182 + Alt-803
RP182
Day 0
14
28
42
56
60
Immunizations
Tumor Measurement

Figure 8

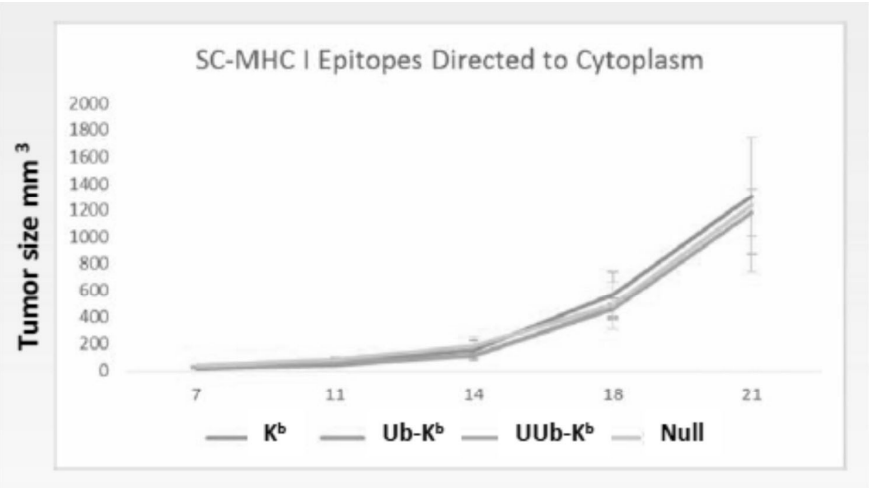


Figure 9A

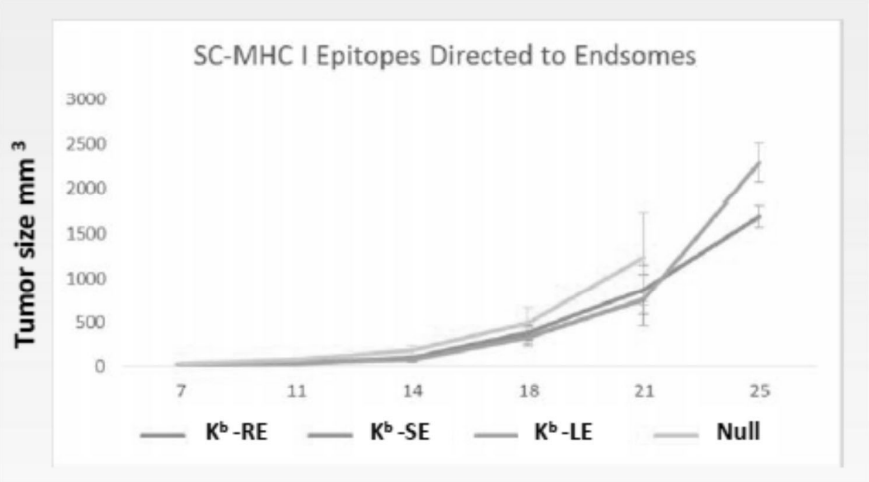


Figure 9B

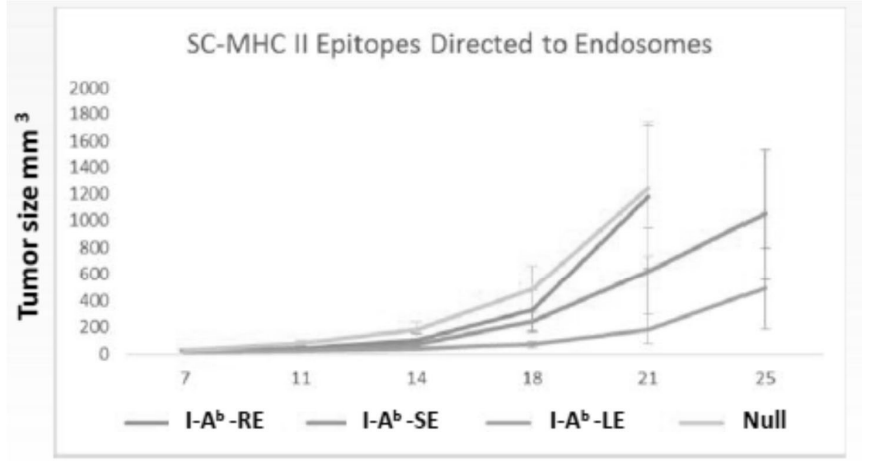


Figure 9C

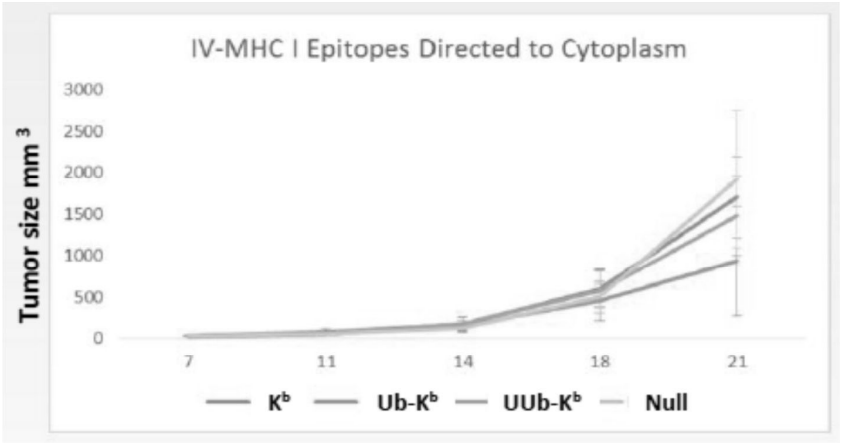


Figure 10A

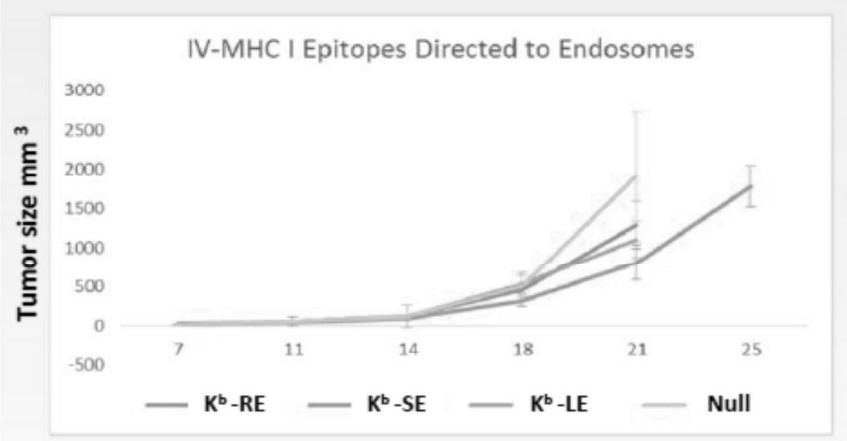


Figure 10B

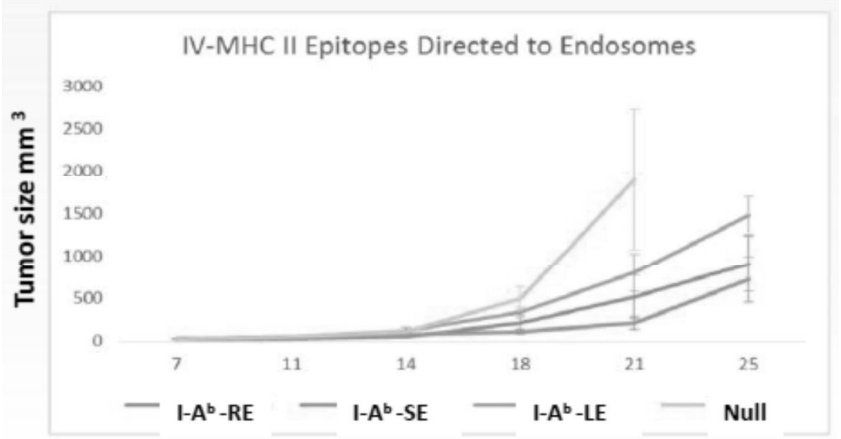


Figure 10C

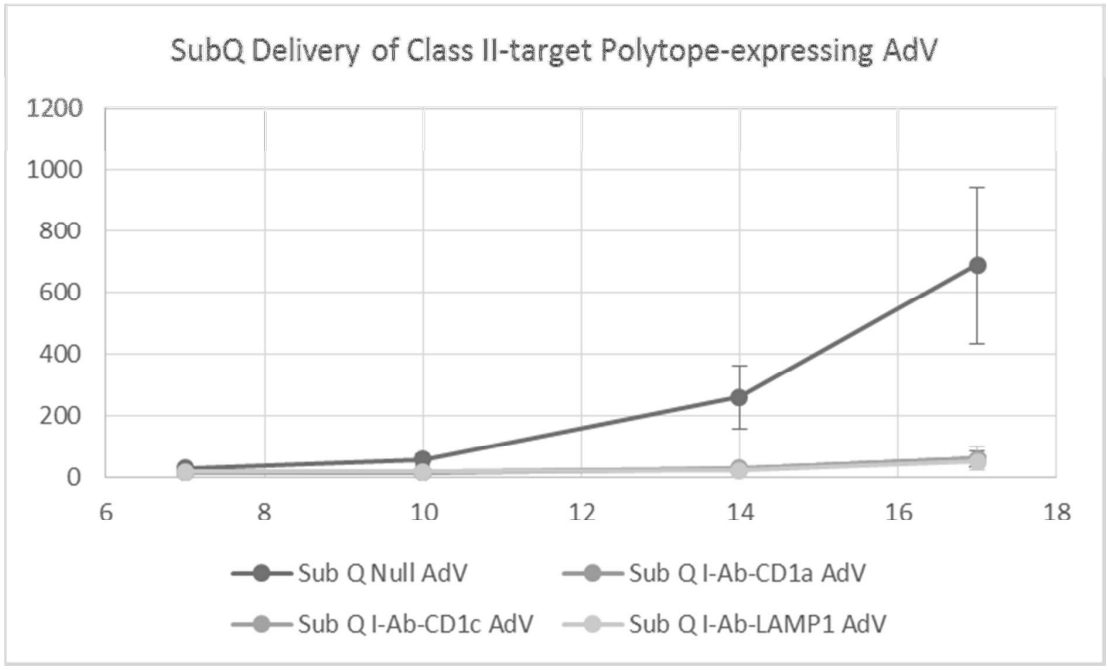


Figure 11A

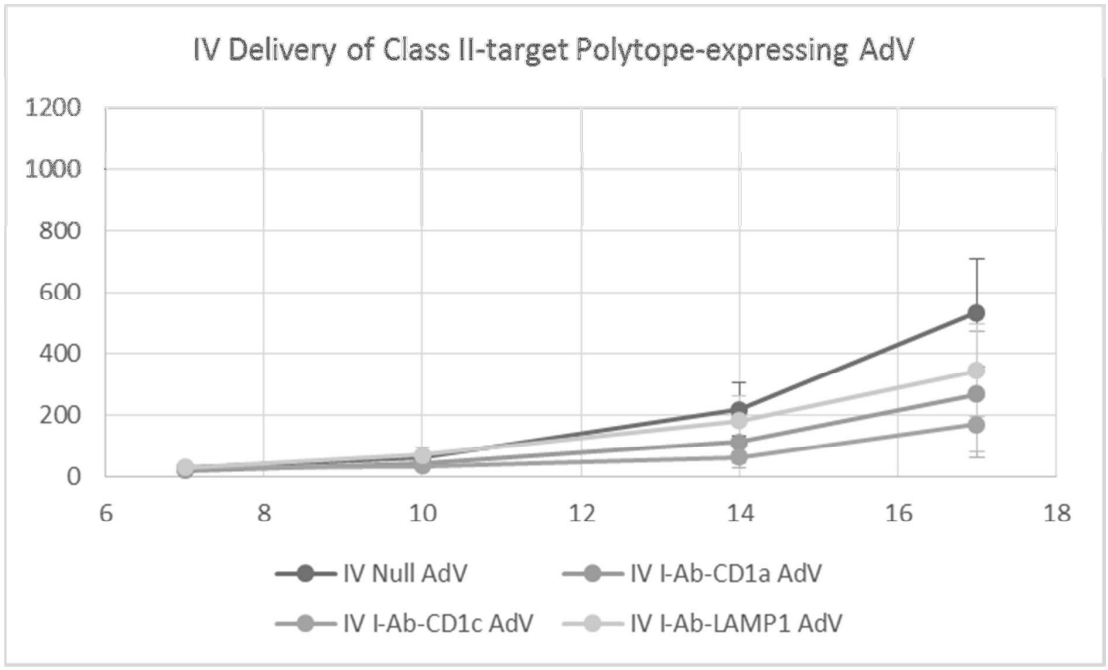


Figure 11B

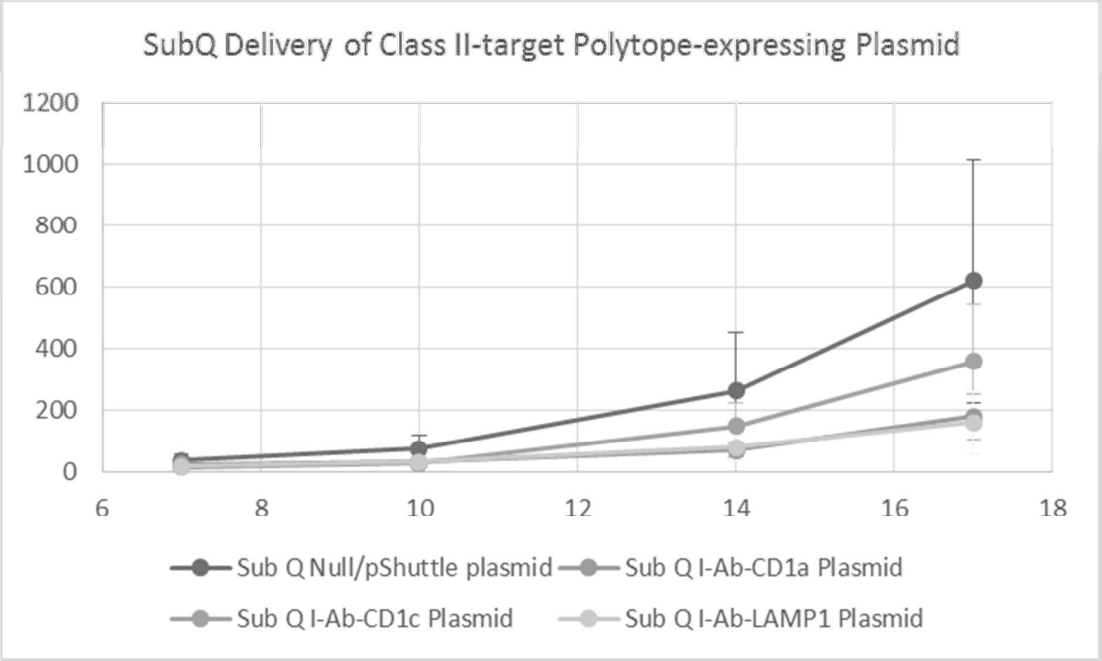


Figure 11C

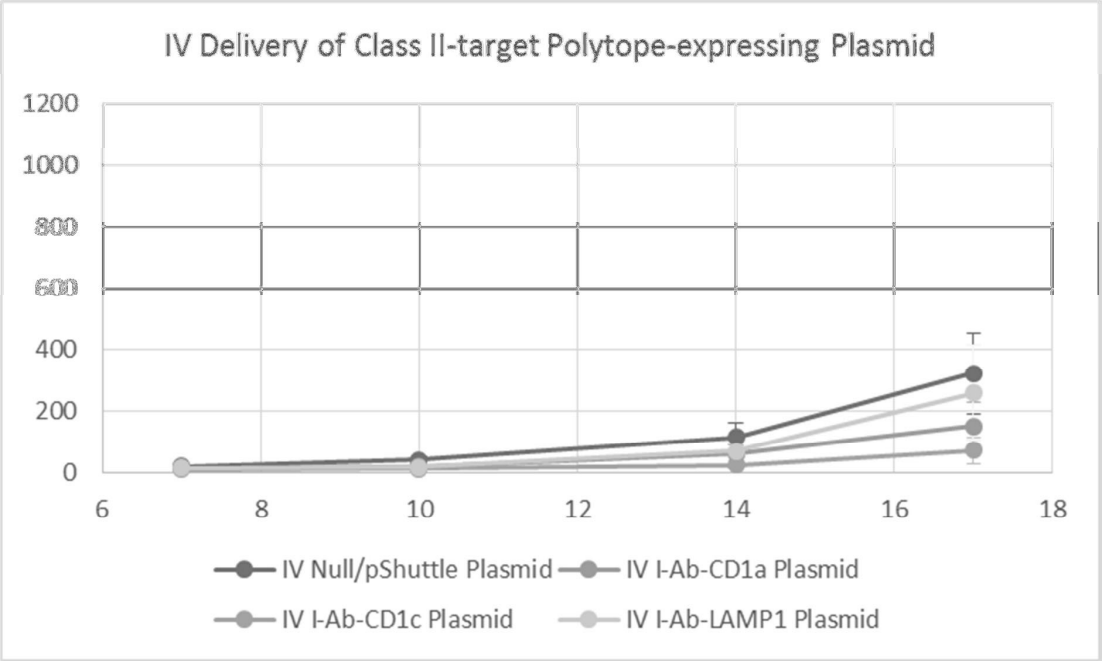


Figure 11D

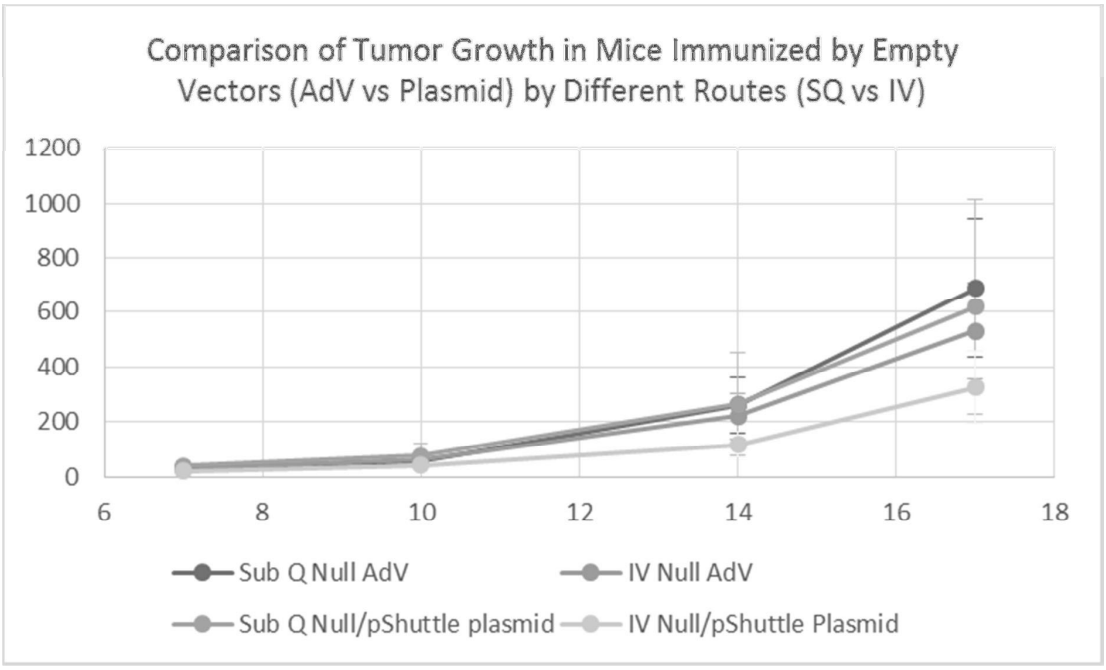


Figure 11E

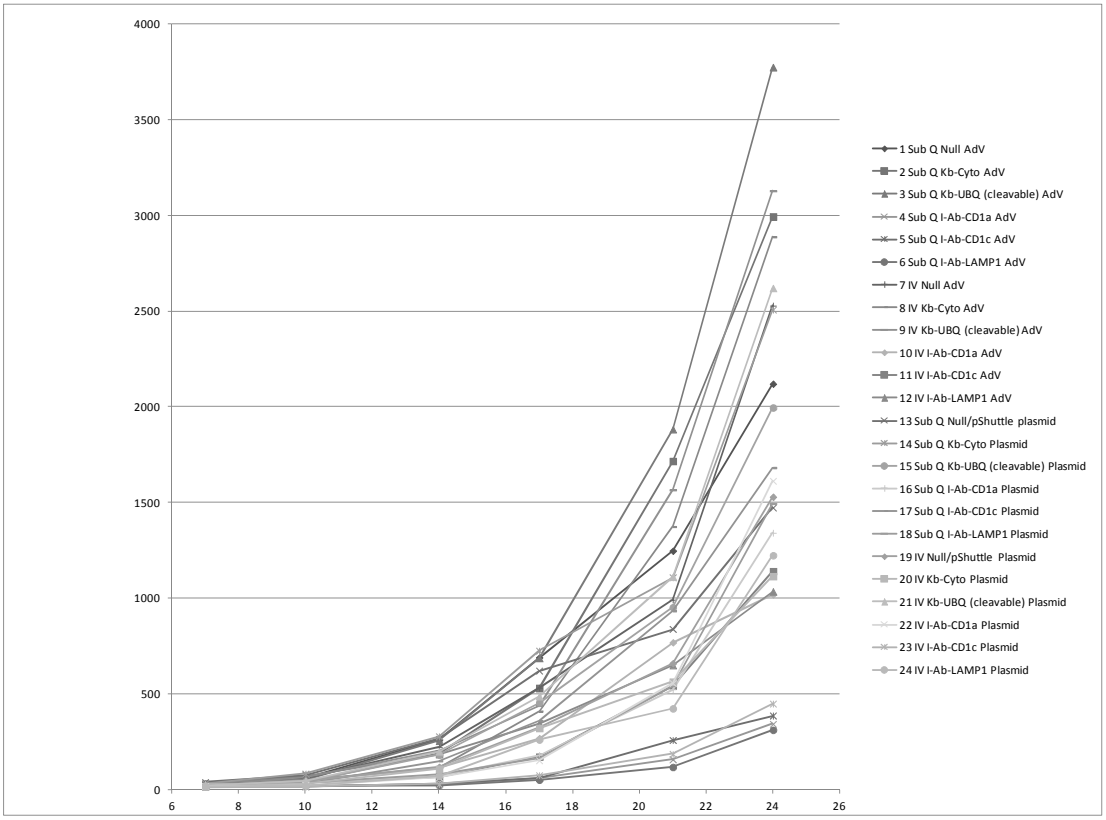


Figure 12