

Figure 1

NPM1.1	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
NPM1.3	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
NPM1.2	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
NOM1.1	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGP VHISGQHLVAVE	120
NPM1.3	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGP VHISGQHLVAVE	120
NPM1.2	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGP VHISGQHLVAVE	120
NPM1.1	EDAESDEEEEEVDKLLSISGKRSAPGGGSKVPQKKVKLAADDDDDDEEDDDDDDDDD	180
NPM1.3	EDAESDEEEEEVDKLLSISGKRSAPGGGSKVPQKKVKLAADDDDDDEEDDDDDDDDD	180
NPM1.2	EDAESDEEEEEVDKLLSISGKRSAPGGGSKVPQKKVKLAADDDDDDEEDDDDDDDDD	180
NPM1.1	FDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPSSTPRSKGQESFKKQEKTPKTPKG	240
NPM1.3	FDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPSSTPRSKGQESFKKQEKTPKTPKG	240
NPM1.2	FDDEEAEEKAPVK-----KGQESFKKQEKTPKTPKG	211
NPM1.1	PSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294
NPM1.3	PSSVEDIKAKMQASIEKAH-----	259
NPM1.2	PSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	265

Figure 2

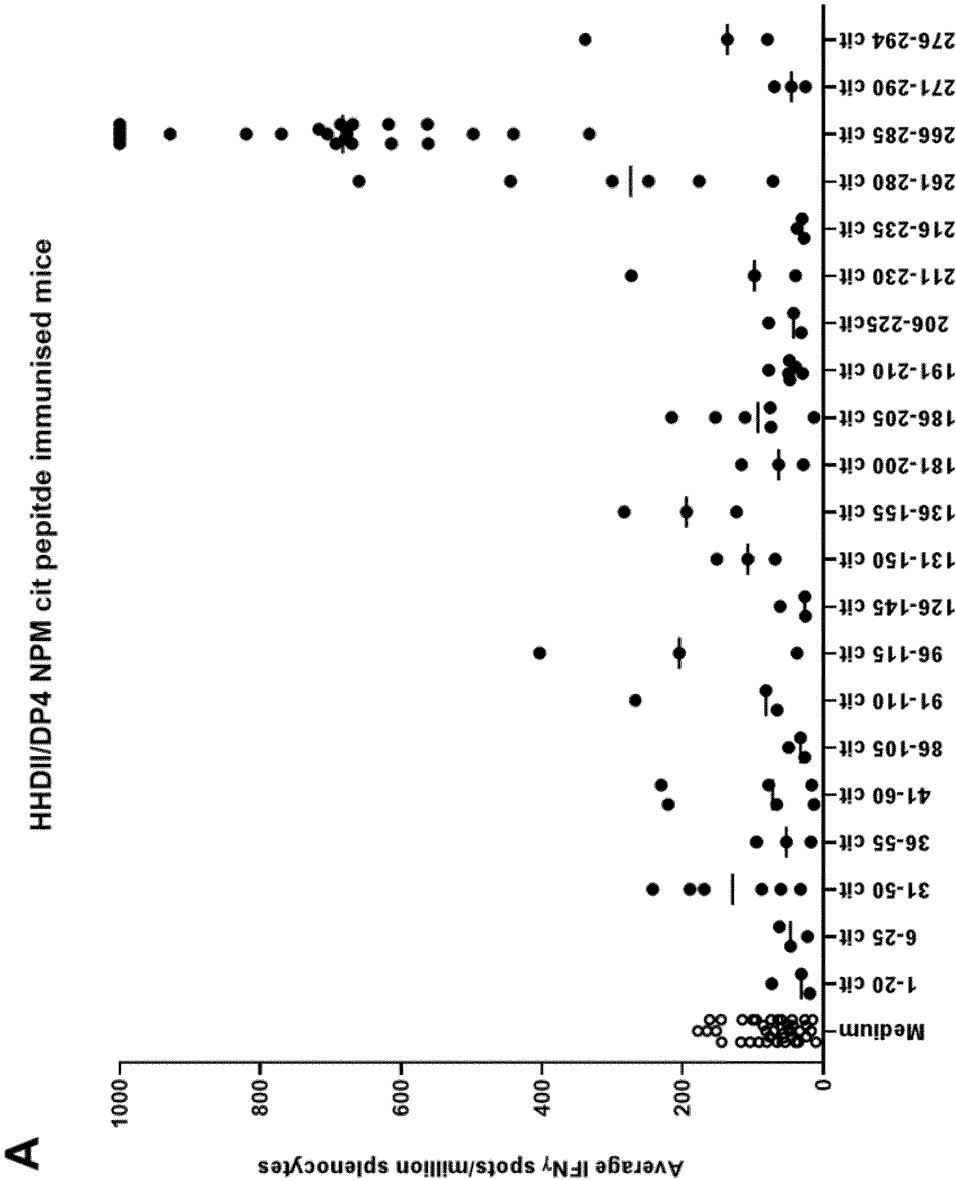


Figure 2 continued

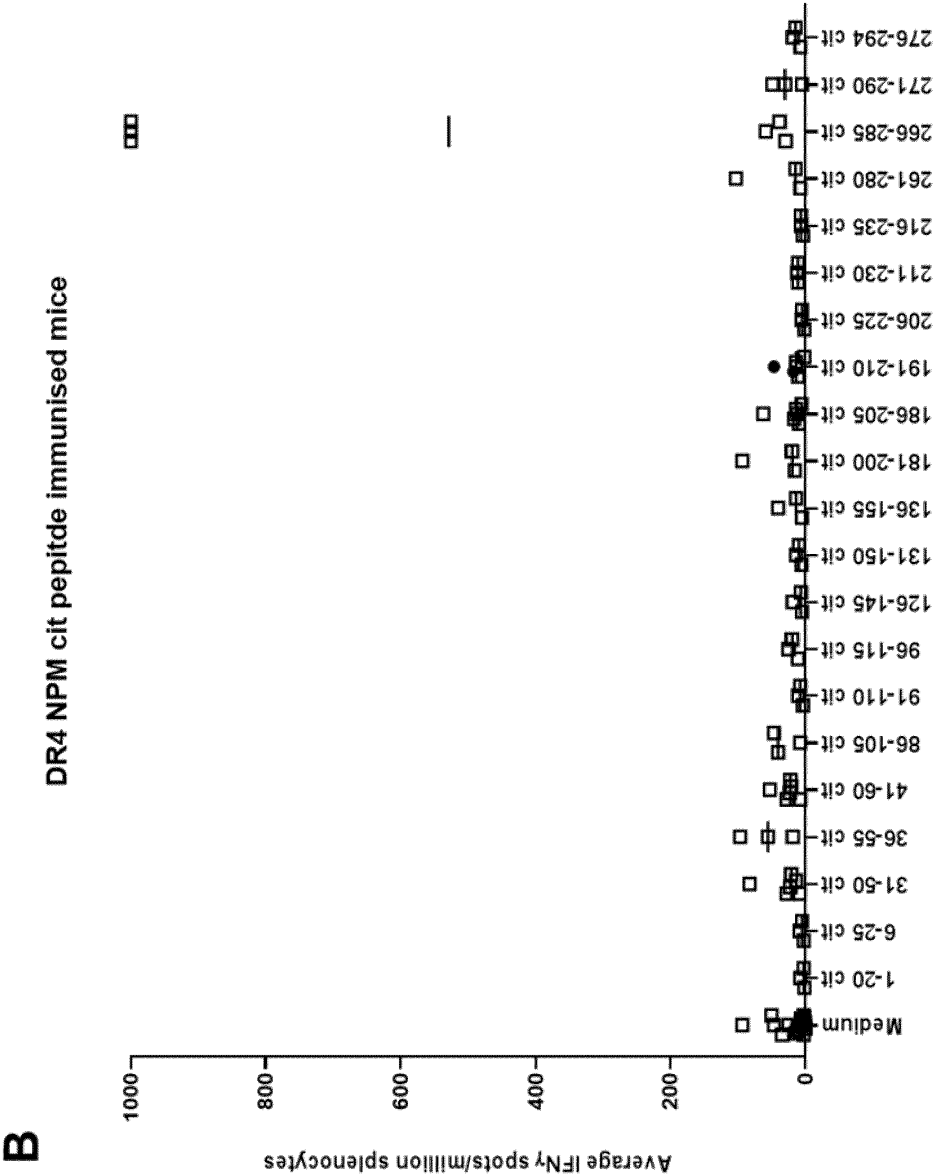


Figure 3

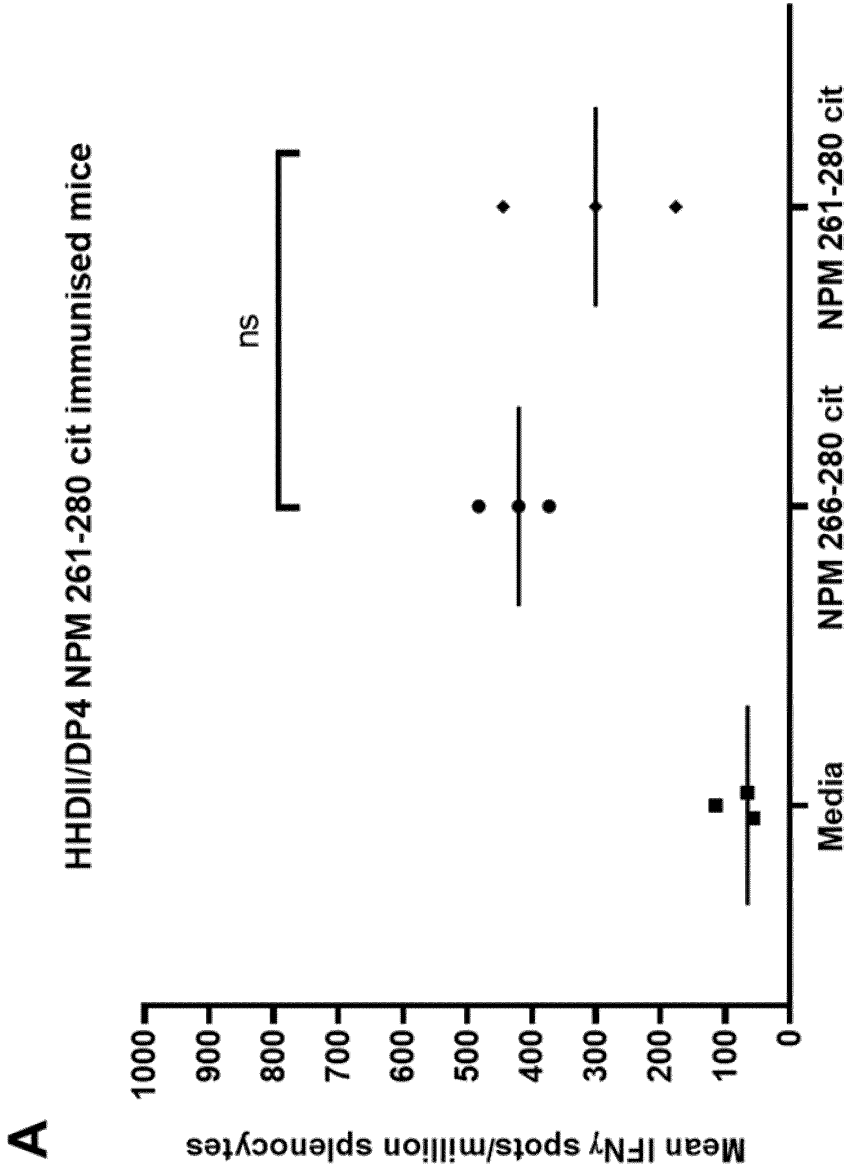


Figure 3 continued

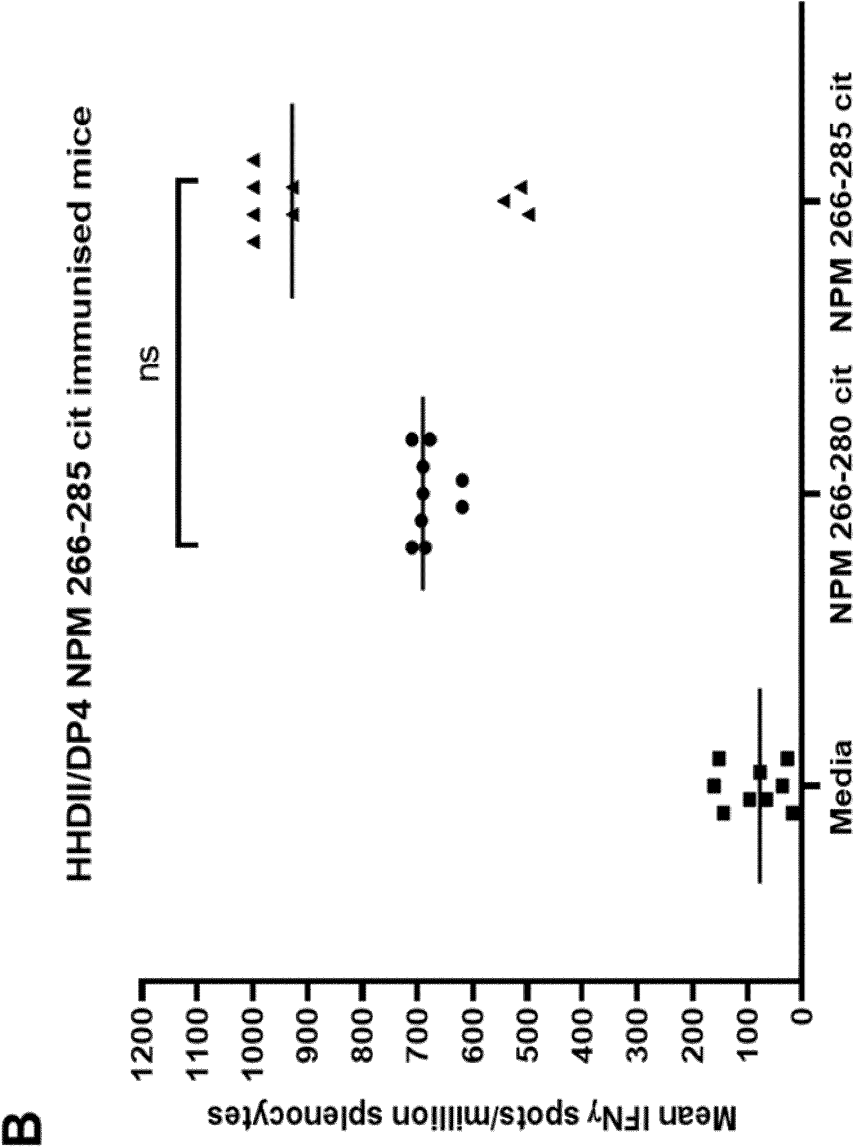
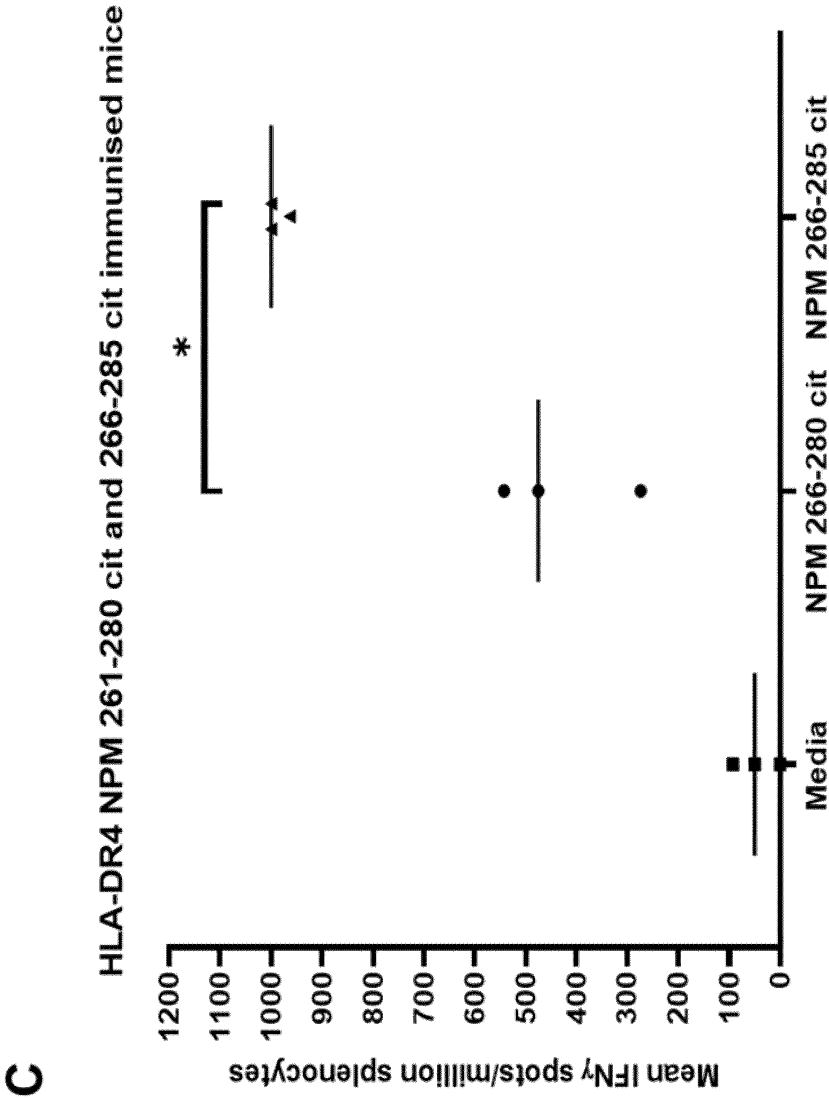


Figure 3 continued



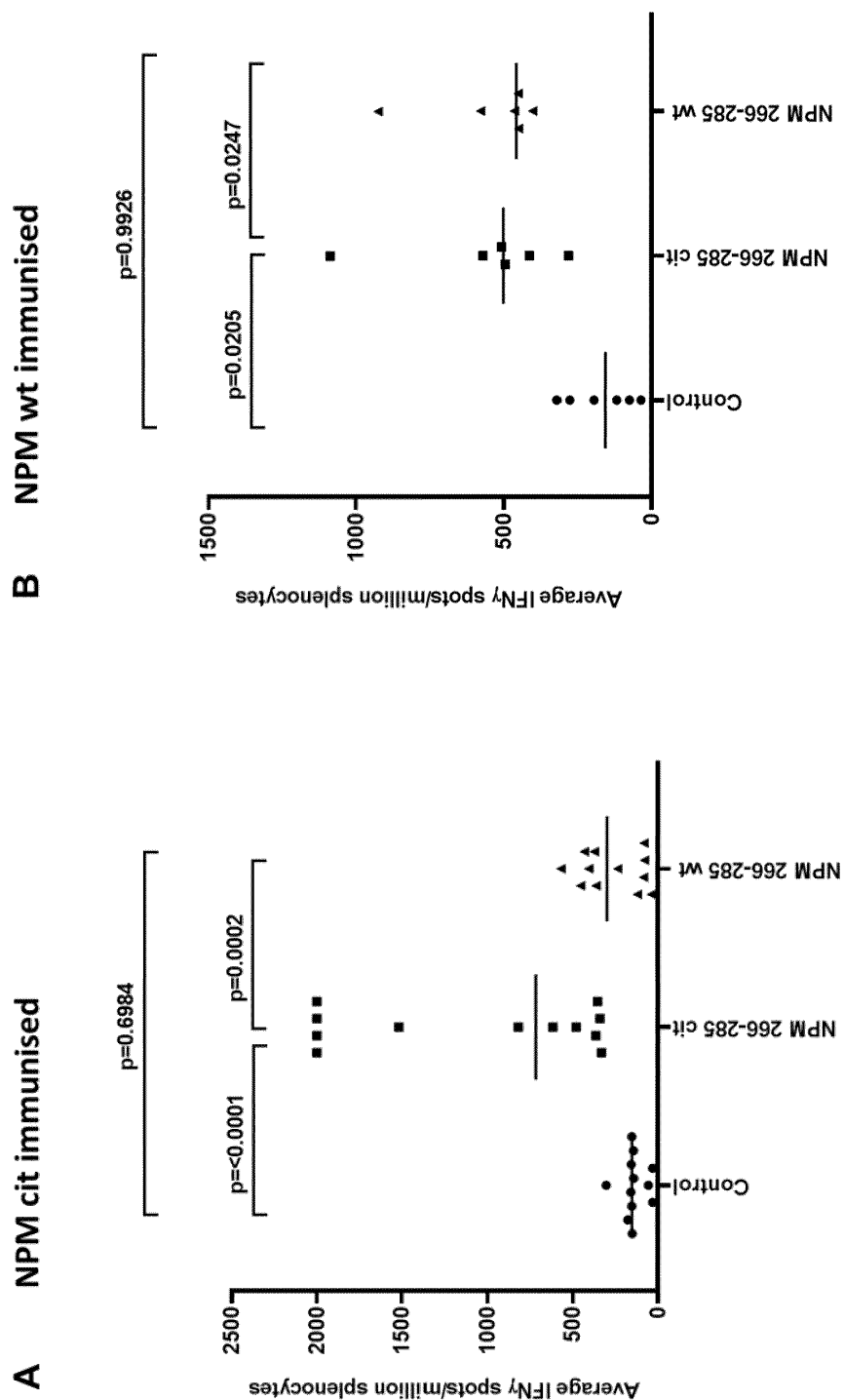


Figure 5

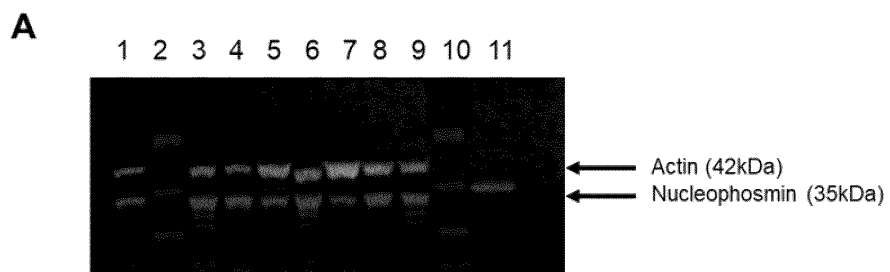


Figure 5 continued

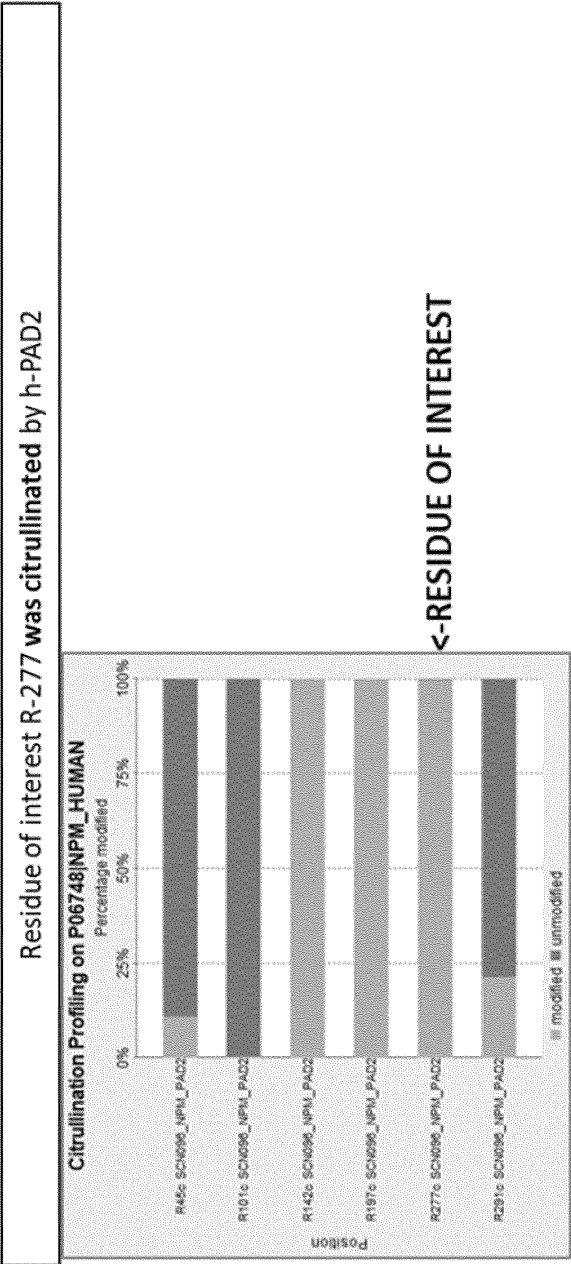
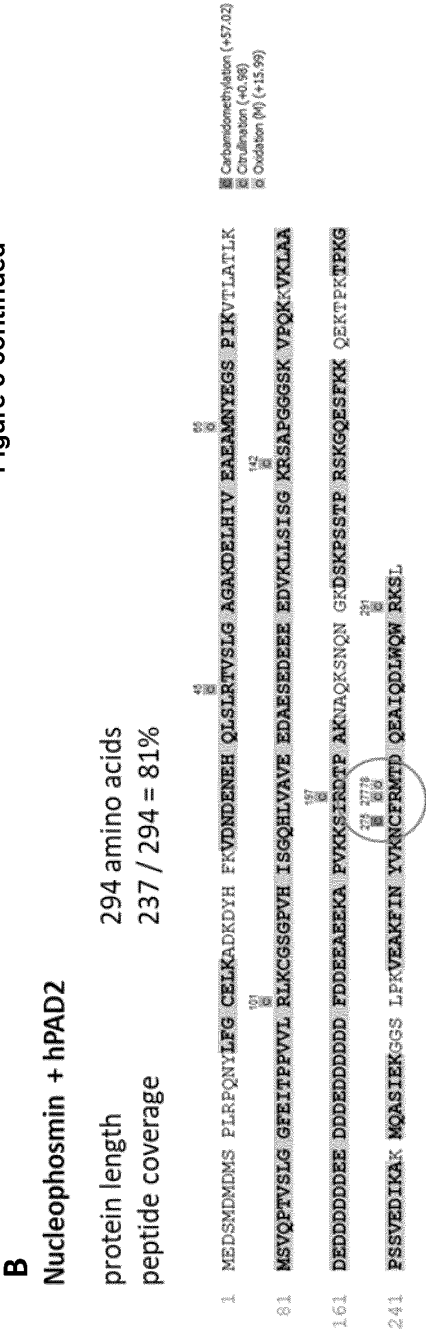
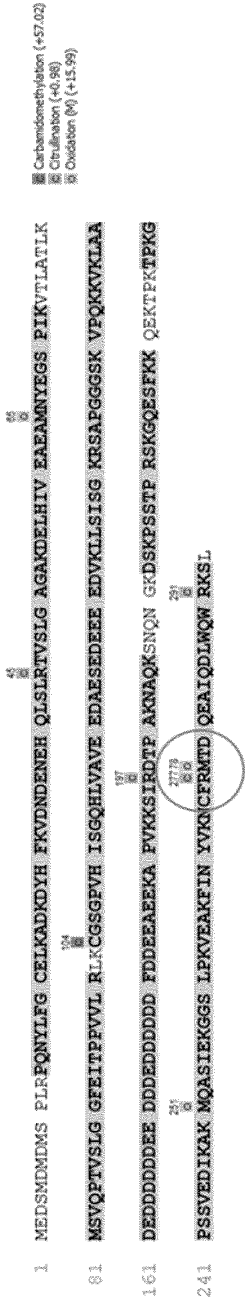


Figure 5B continued

Nucleophosmin + hPAD4

protein length 294 amino acids
peptide coverage 259 / 294 = 88%



Residue of interest R-277 was citrullinated by h-PAD4

Rate of citrullination

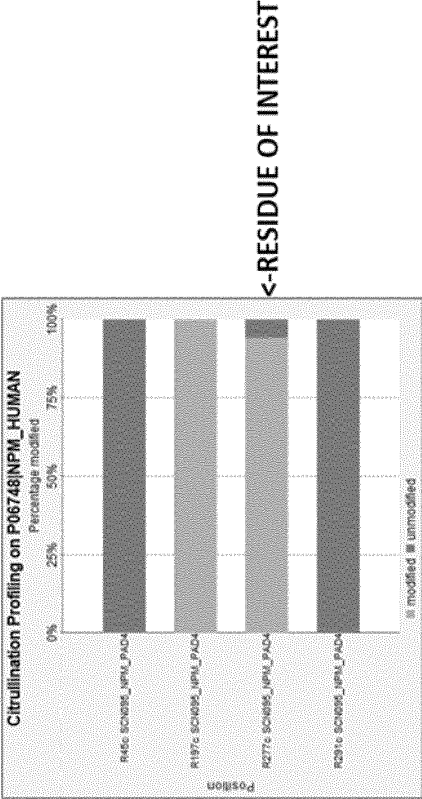


Figure 6

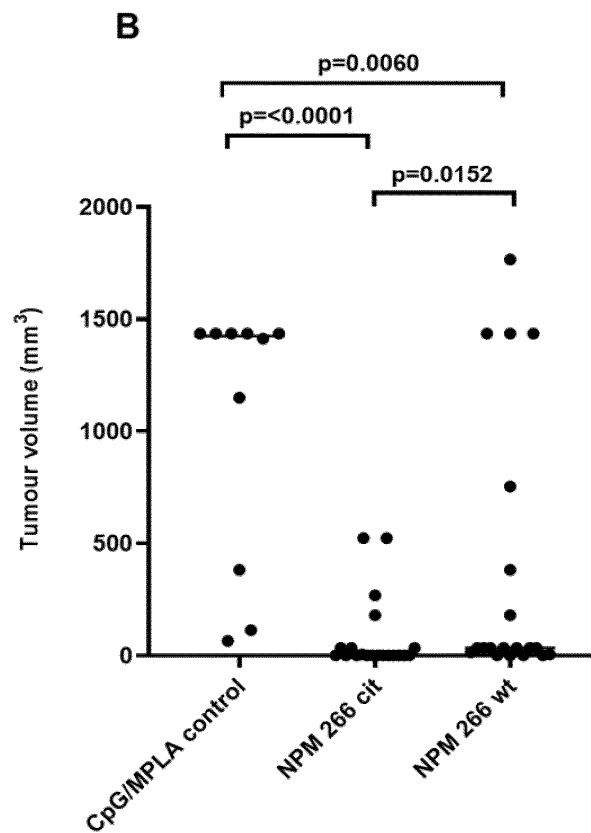
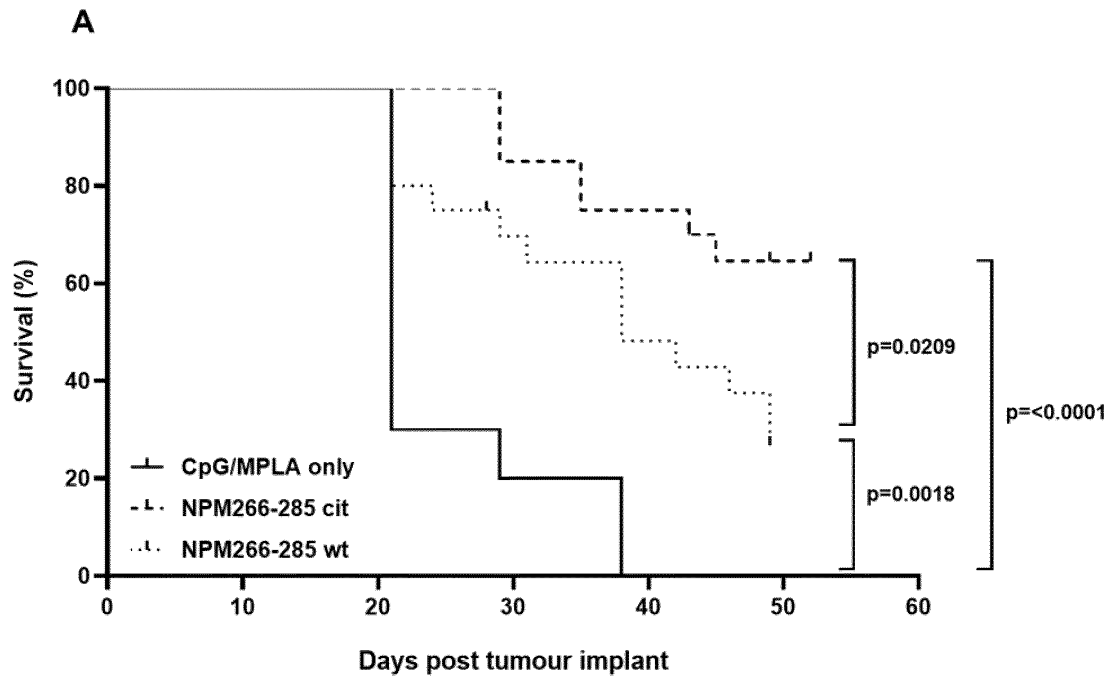


Figure 7

A

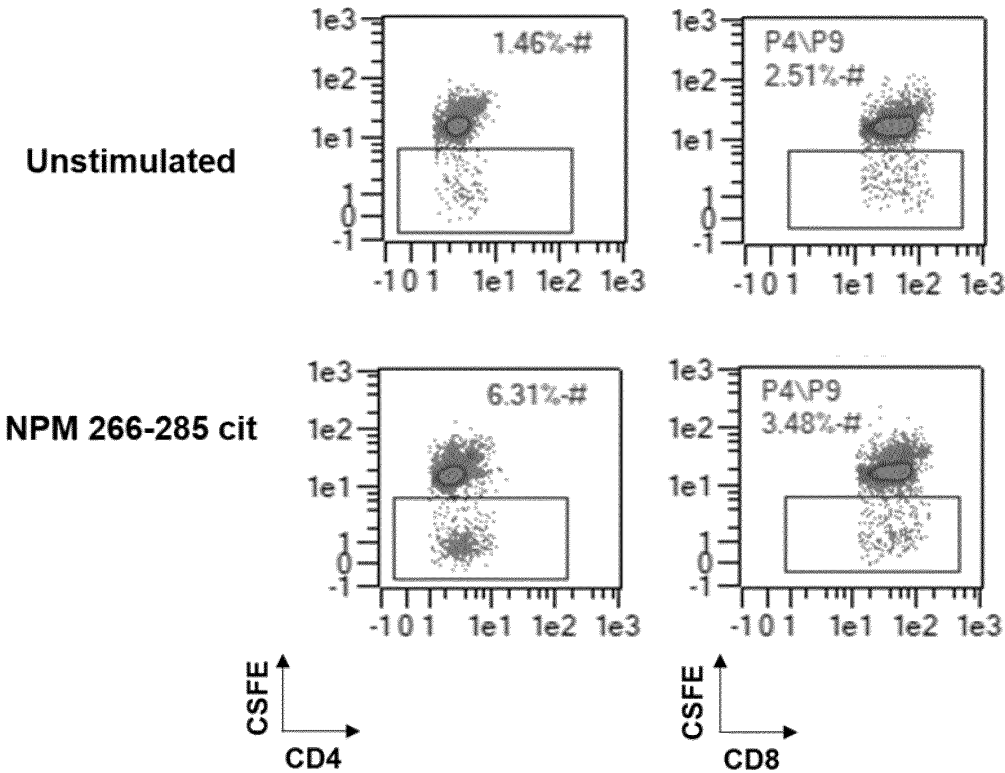


Figure 7 continued

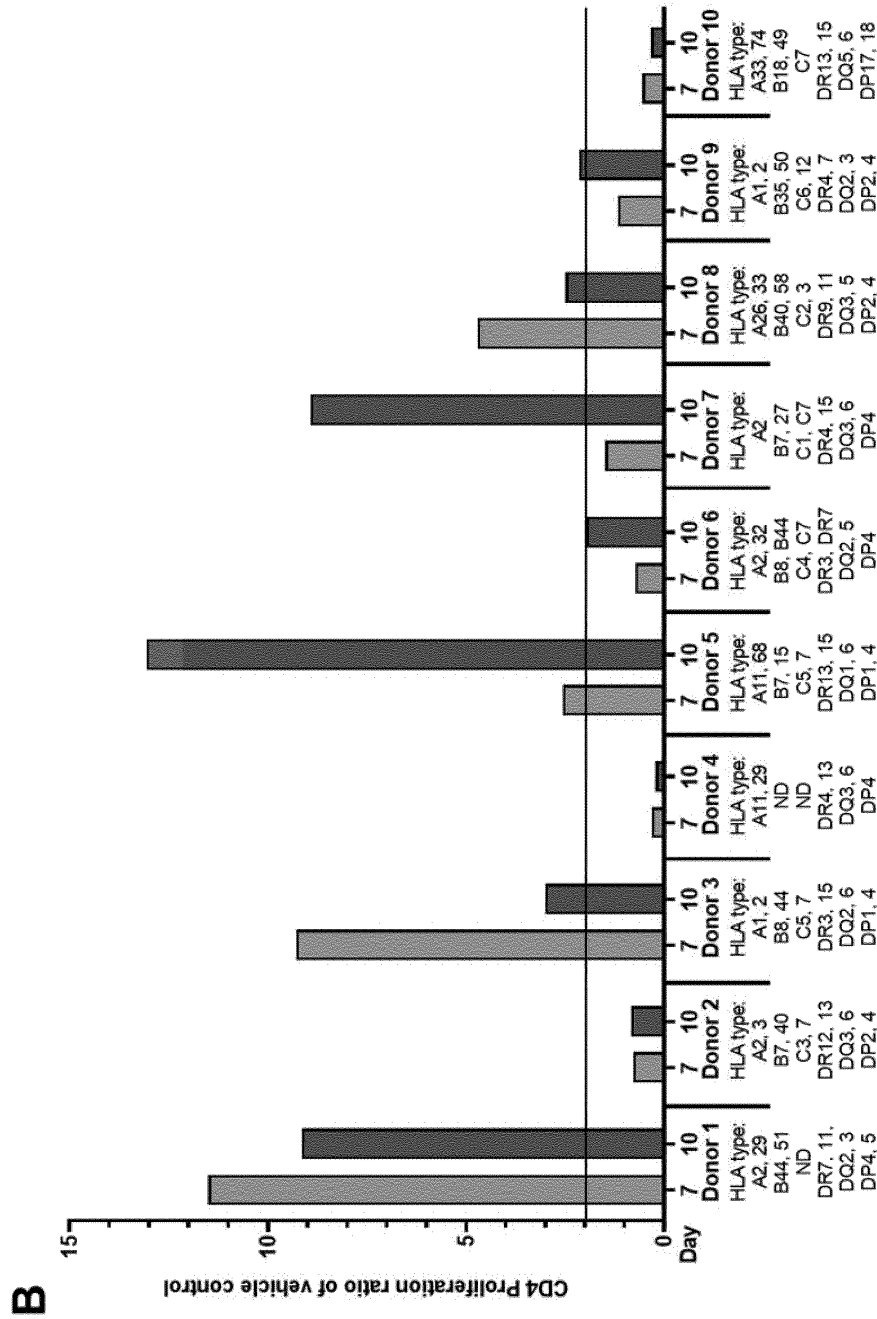


Figure 7 continued

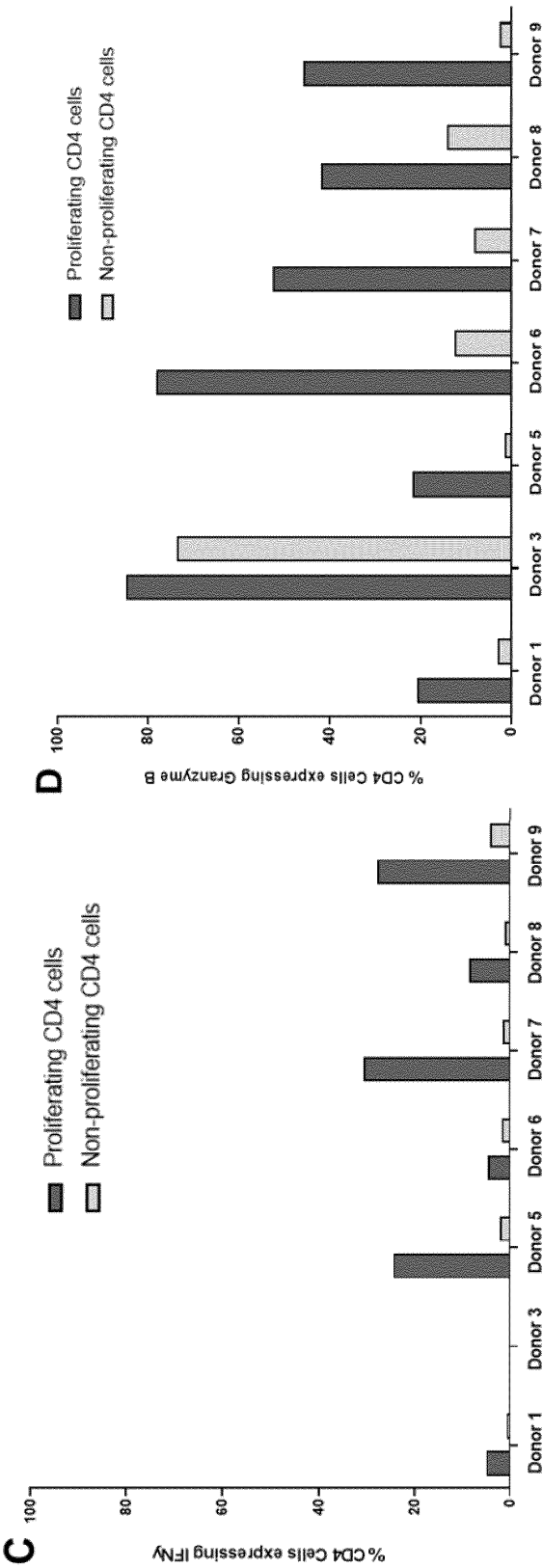


Figure 7 continued

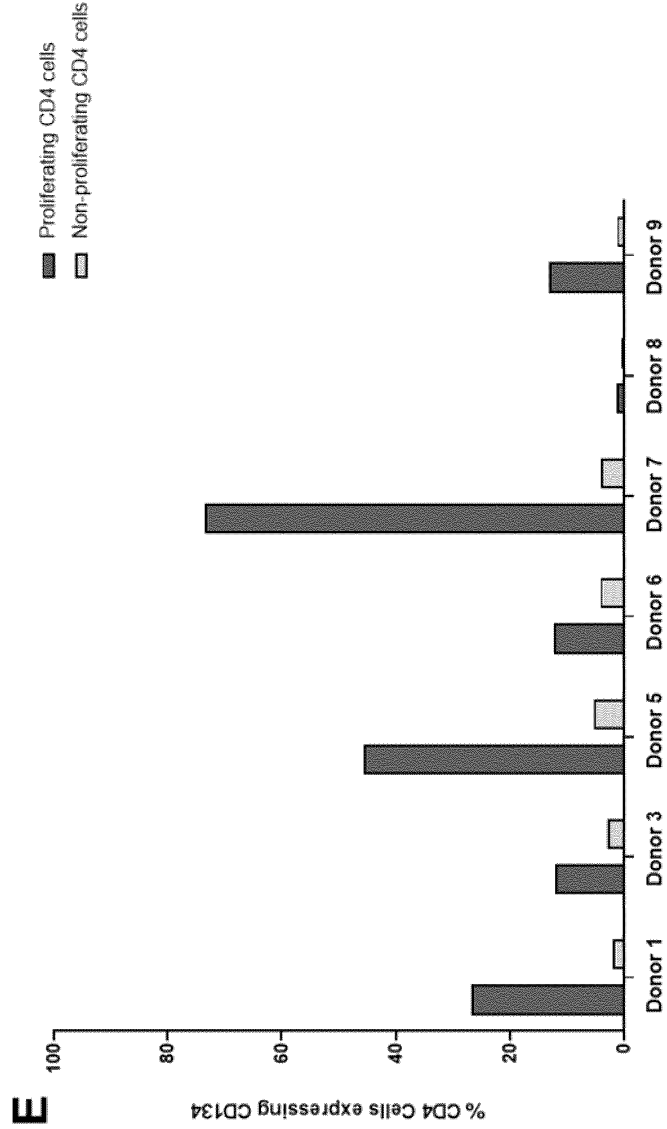


Figure 7 continued

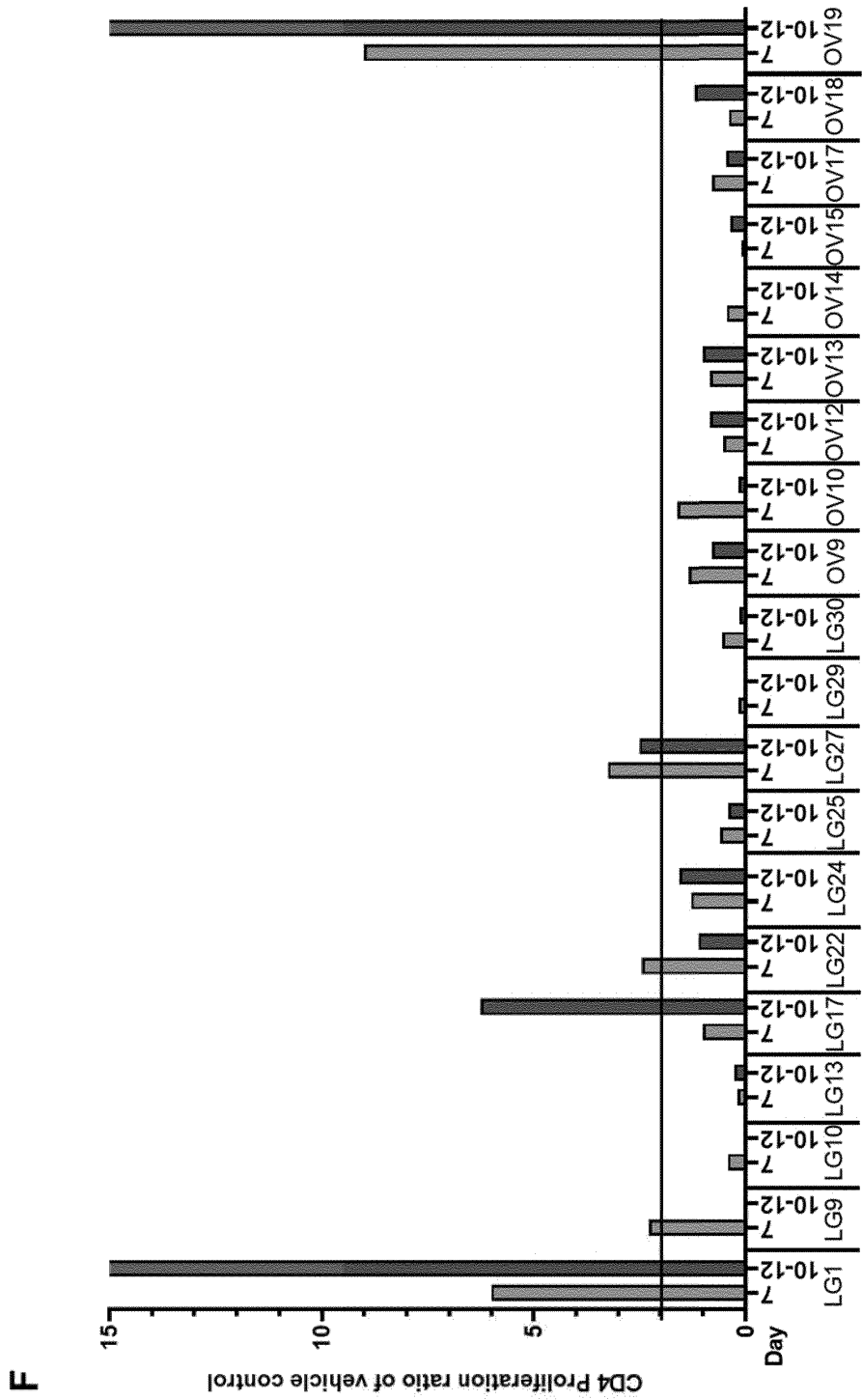


Figure 8

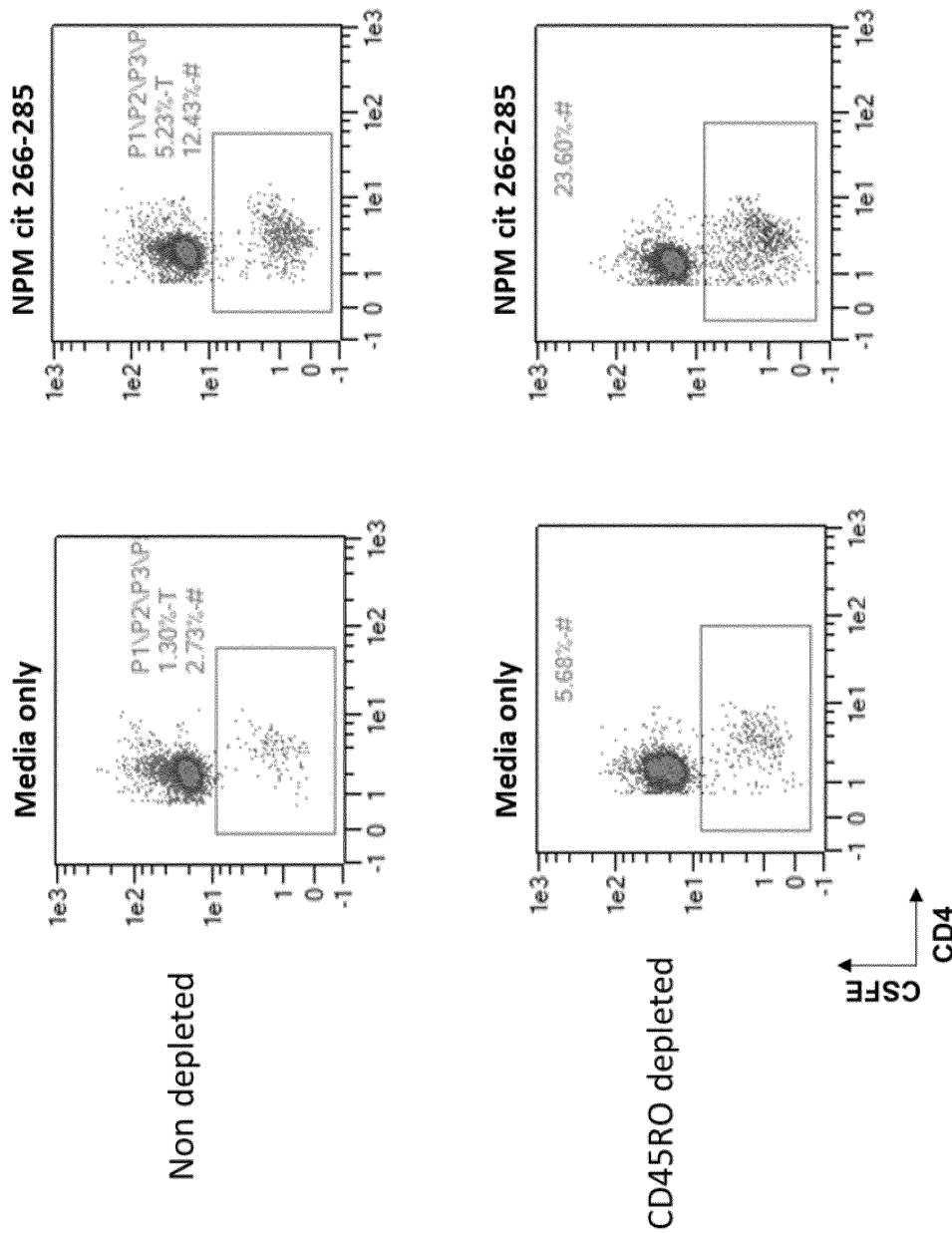


Figure 9

Human	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
Mouse	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
Cow	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHV	60
Pig	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
Horse	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
Dog	MEDSMDMDMSPLRPQNYLFGCELKADKDYHFKVDNDENEHQLSLRTVSLGAGAKDELHIV	60
Human	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Mouse	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Cow	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Pig	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Horse	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Dog	EAEAMNYEGSPIKVTLATLKMSVQPTVSLGGFEITPPVVLRLKCGSGPVIHISGQHLVAVE	120
Human	EDAESDEEEEDVKLLSISGKRSAPGGGSKVPQKKVKLADEDDDDDD-EEDDDDDDDDD	179
Mouse	EDAESDEEEEDVKLLSGMKGKRSAPGGGNKVPQKKVKLDEDDDD--DDEDDDDDDDDDD	178
Cow	EDAESDEEEEDVKLLSISGKRSAPGGGSKVPQKKVKLADEDEDDDDDDDDDDDDDDDD	180
Pig	EDAESDEEEEDVKLLSISGKRSAPGGGSKVPQKKVKLADEDEDDDDDDDDDDDDDDDD	180
Horse	EDAESDEEEEDVKLLSISGKRSAPGGGSKVPQKKVKLADEDDDDDDDDDDDDDDDDDD	180
Dog	EDAESDEEEEDVKLLSISGKRSAPGGGSKVPQKKVKLADEDDDDDDDDDDDDDDDDDD	180
Human	DFDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPSSTPRSKGQESFKKQEKTPKTPK	239
Mouse	DFDDEEVEEKAPVKKSVRDTPAKNAQKSNQNGKDLKPS-TPRSKGQESFKKQEKTPKTPK	237
Cow	DDFDEEVEEKAPVKKSVRDTPAKNAQKSNQNGKDSKPS-TPRSKGQESFKKQEKTPKTPR	239
Pig	DFDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPS-TPRSKGQESFKKQEKTPKTPK	239
Horse	DFDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPS-TPRSKGQESFKKQEKTPKTPK	239
Dog	DFDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPS-TPRTKGQESFKKQEKTPKTPK	239
Human	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294
Mouse	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	292
Cow	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294
Pig	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294
Horse	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294
Dog	GPSSVEDIKAKMQASIEKGGSLPKVEAKFINYVKNCFRMTDQEAIQDLWQWRKSL	294

Figure 10

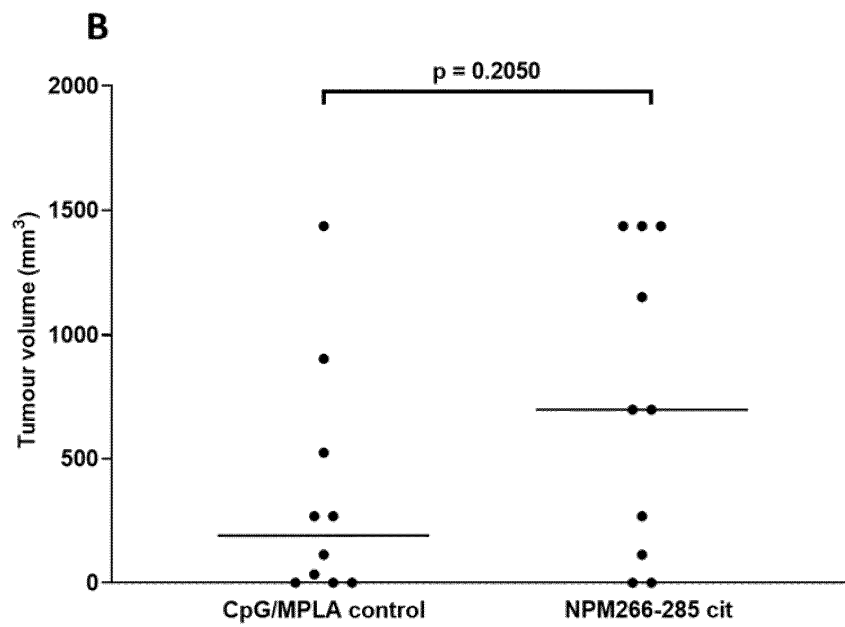
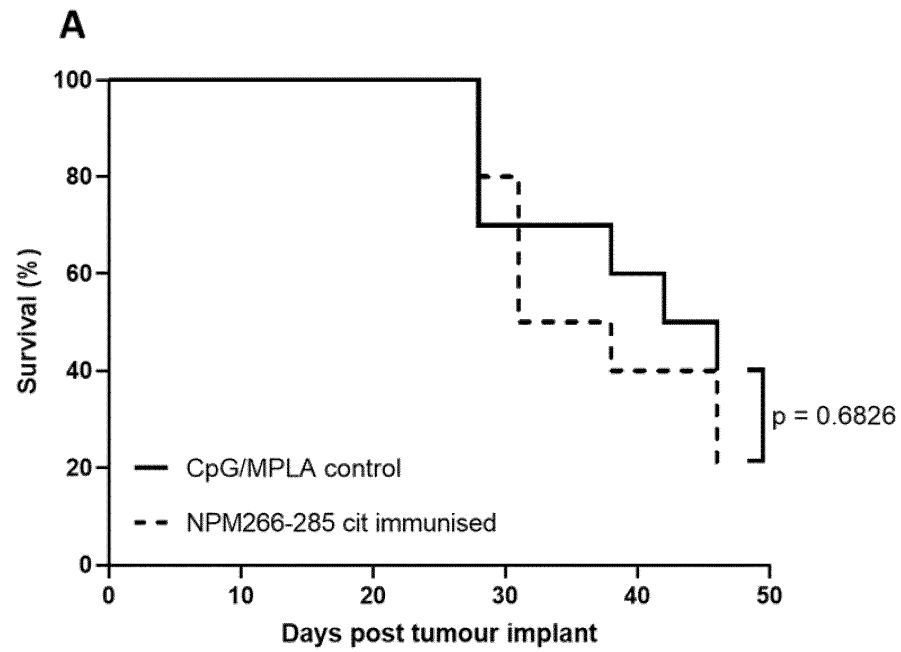


Figure 11

