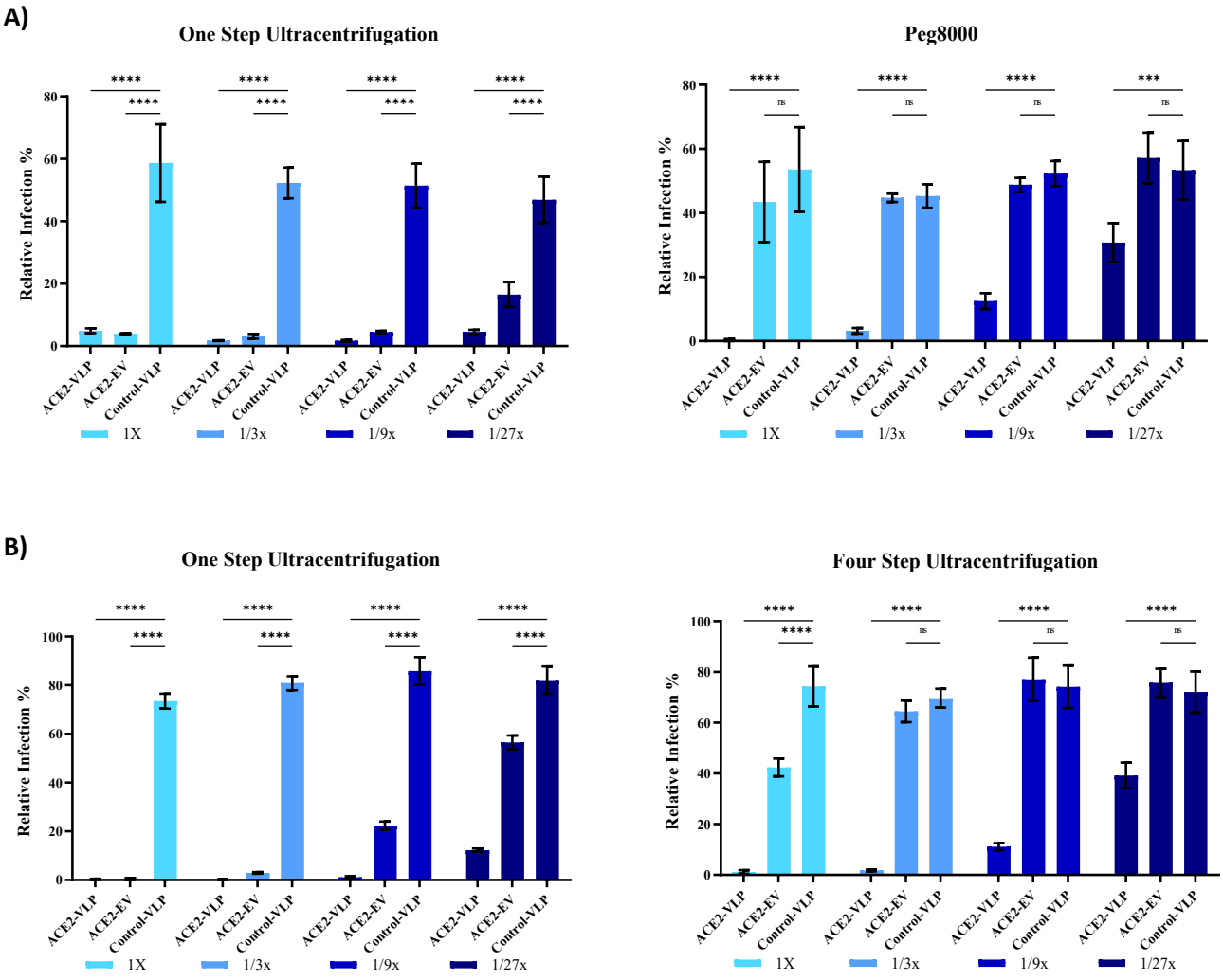
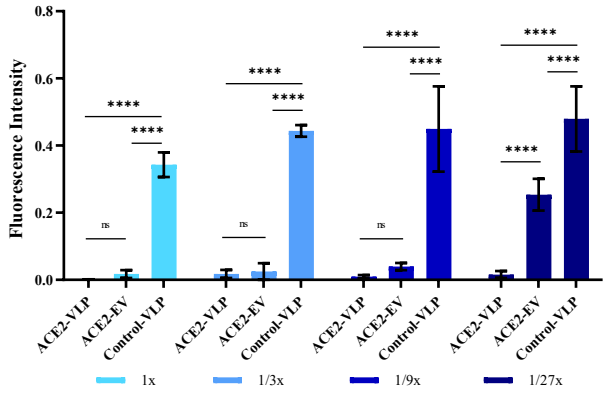
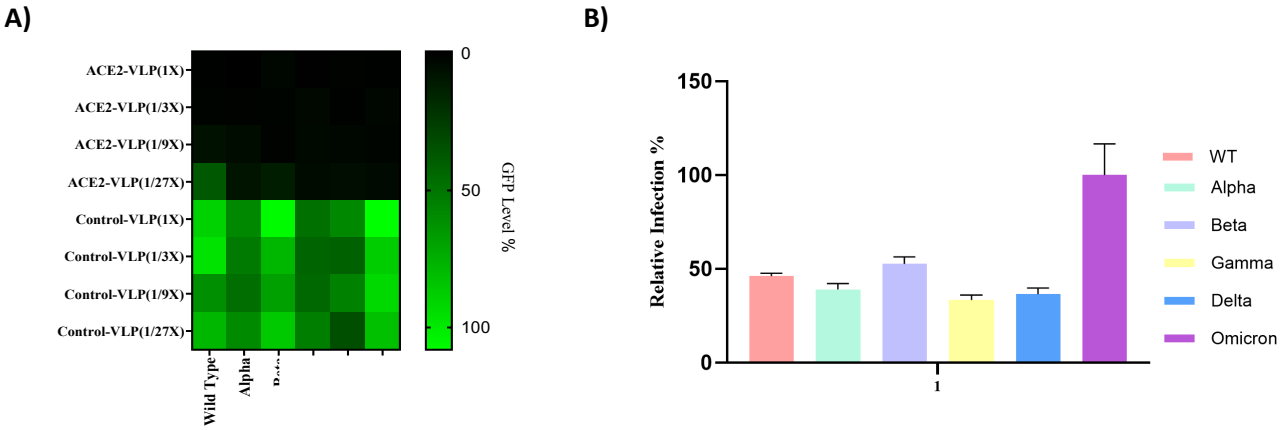
Supplementary Information



Supplementary Figure 1. ACE2 reagents purified by single-step ultracentrifugation yielded higher pseudovirus neutralization efficiency. (A) The relative infection rates of pseudoviruses bearing the SARS-CoV-2 Spike protein were assessed in ACE2 and TMPRSS2-expressing HEK293T cells in the presence of various dilutions of concentrated ACE2 constructs obtained through ultracentrifugation and PEG8000 methods. VLPs without envelope (Control-VLP) were used as control. n=3 (B) The relative infection rates of pseudoviruses bearing the SARS-CoV-2 Spike protein were assessed in ACE2 and TMPRSS2-expressing HEK293T cells in the presence of various dilutions of concentrated ACE2 constructs obtained through one-step ultracentrifugation and four-step ultracentrifugation methods. VLPs without envelope (Control-VLP) were used as control. n=3 ns: $p > 0.05$, ****: $p <= 0.0001$, Two way ANOVA.)



Supplementary Figure 2. Ouantification of Neutralization. Fluorescence intensities were calculated by analyzing 4 different images for each condition with ImageJ software. (ns: p > 0.05, ****: p <= 0.0001, Two way ANOVA) n=3



Supplementary Figure 3. Effect of ACE2-VLP on VOCs. A) Relative infection rates of pseudoviruses bearing VOC-spike in the presence of ACE2-VLP in HEK293T cells expressing ACE2 and TMPRSS2. ACE2-VLPs were serially diluted in culture media. Culture medium was used as control, and infection rates were normalized to fluorescence level of control. B) The relative infection rates of pseudoviruses bearing the VOCs of SARS-CoV-2 Spike protein were assessed in ACE2 and TMPRSS2-expressing HEK293T cells.

Supplementary Table 1. Primers used for cloning (5’-3’)

Ace2-18aa-Trunc-Q5sdm-F1	tagctcgagtctagaggg
Ace2-18aa-Trunc-Q5sdm-R1	gctaatatcgatggaggc
Ace2-25aa-Trunc-Q5sdm-R2	aggattttctccacttcttg
Ace2-33aa-Trunc-Q5sdm-R3	atttttcttcttccgatctctg
Mmlv-Gag-Promoter-F	gttcctttccatgggtcttttctgc
Mmlv-Gag-AgeI-R	gtctgaaccggtagacgagttctccattagcagcgtggacgtgtcatctagggtcaggagggag
Peg10-Kozak-BstxI-F1	gatcagccaccatgctgggtcccgactgcccac
Peg10-Kozak-NotI-F2	aacattgcggccgccaccatgctgggtcccgactgcccac
Peg10-Full-NheI-R1	gtcgatgctagctcacagggtactgtaagatggaggcgg
Peg10-Gag-Like-AgeI-R2	gtcgataccggtcaccggctcggttggatctacctggtggtgcagcggggccggggagtttcc
Hpeg10-EcoRI-Kozak-F	tgatctgaattcgccaccatgctgggtcccgactgcccac
Hpeg10-EcoRI-Kozak-Dsatg-F	tgatctgaattcgccaccatgaccgaacgaagaagggacg
Mpeg10-NheI-F	ctgaattccccaagctggctagcgt
Mpeg10-AgeI-Linker-R	ctgtgaaccggtacctcccacaggctcggtgggatcggtctgcagcggggccggggagt
Hpeg10-Ltr1-AgeI-R	aatagaaccggtgttggggacacacgcac
Hpeg10-Ltr2-AscI-F	aatagaggcgcgccatacctgtcatgtccttcaggatc
Mpeg10-New-SalI-F	gactcaagtcgacgccaccatggctgctgc