

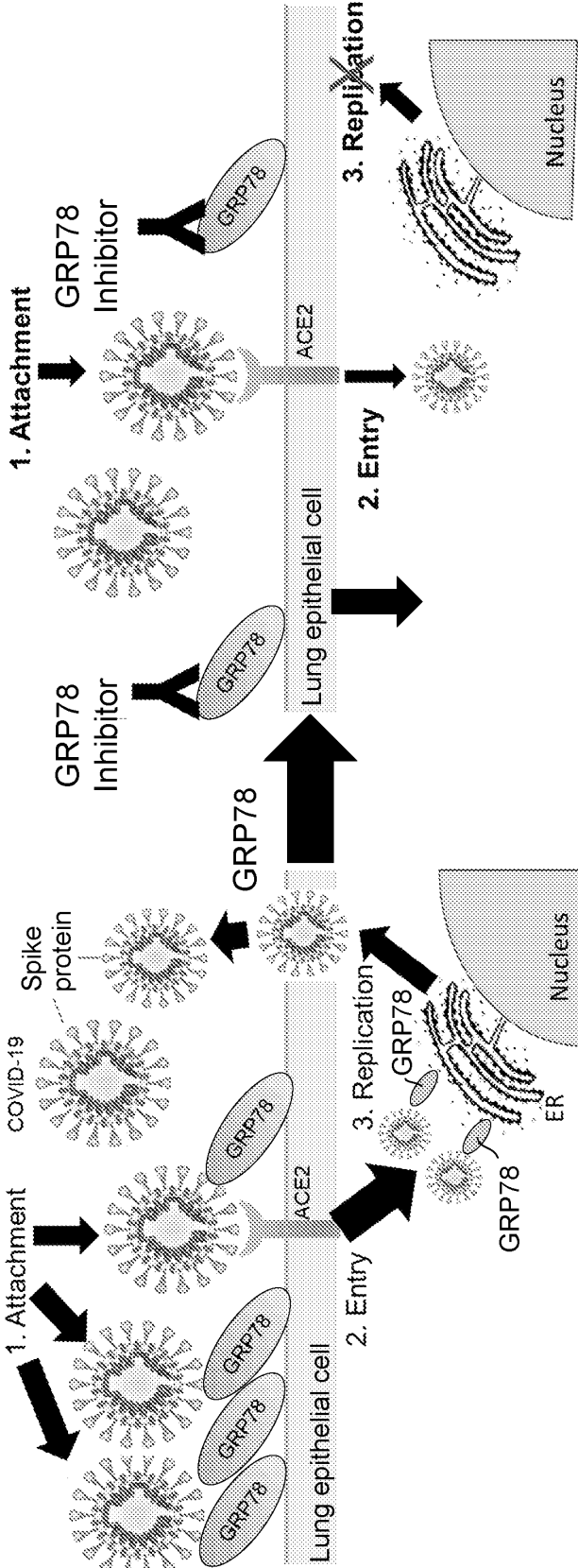


FIG. 1B

FIG. 1A

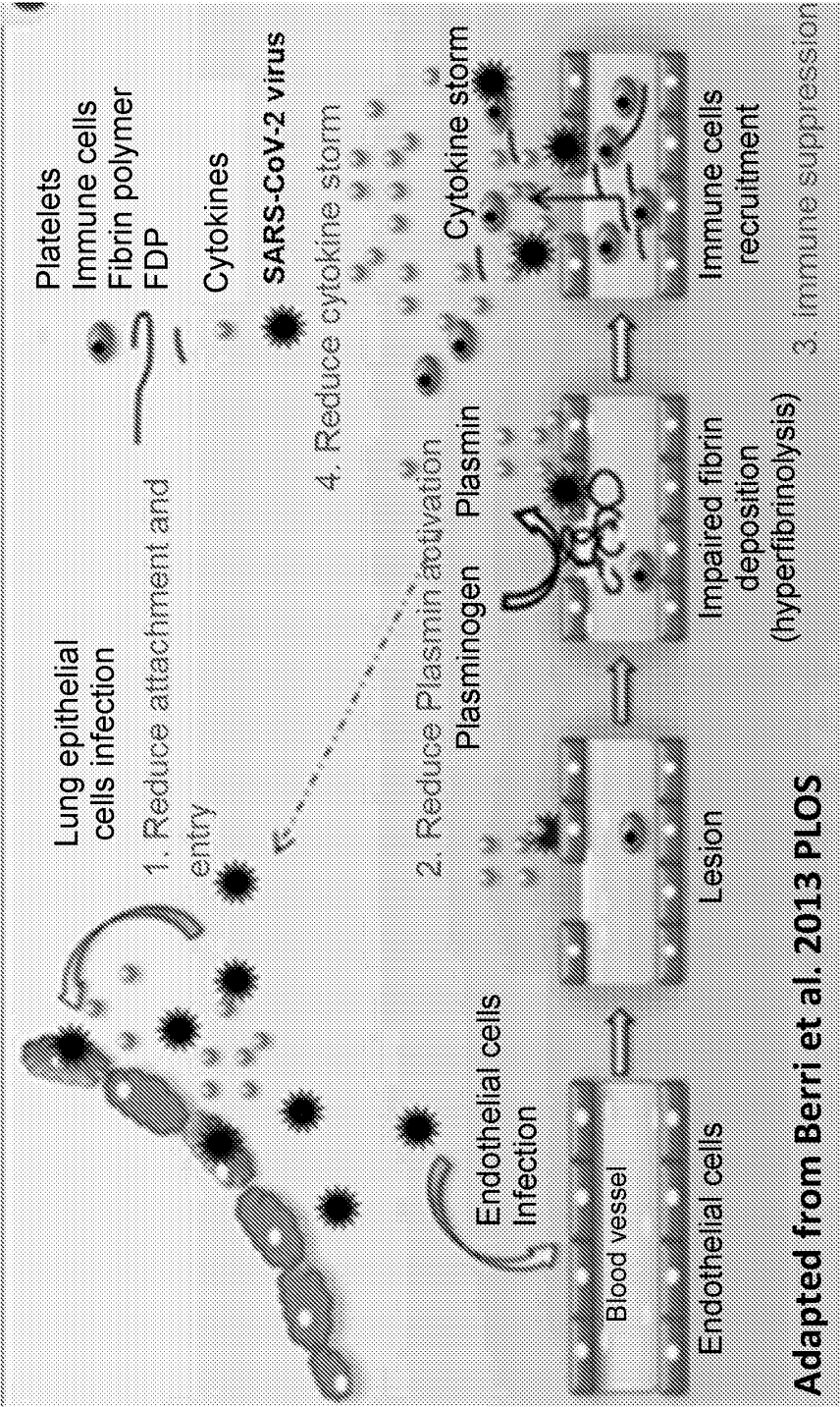
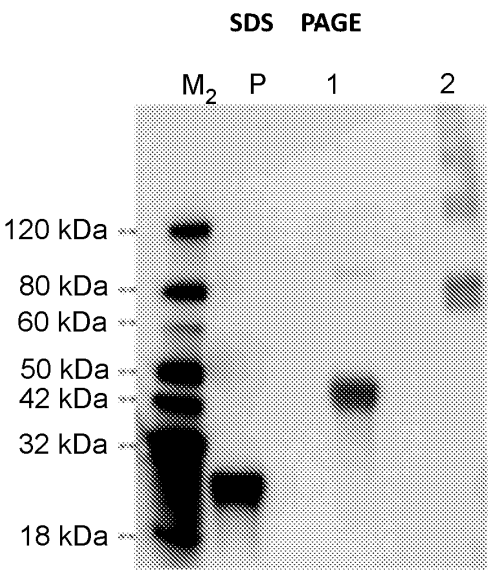
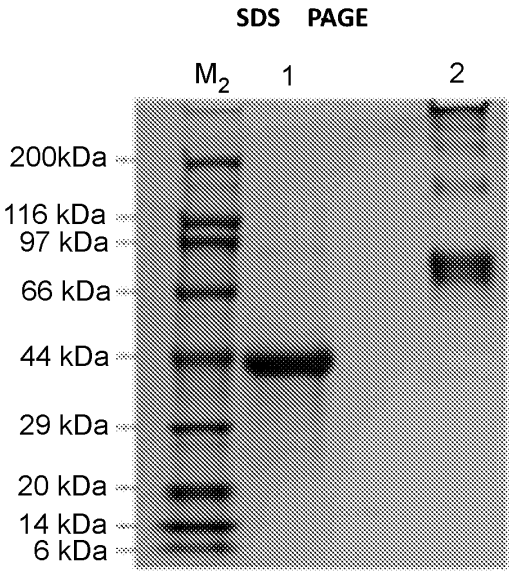


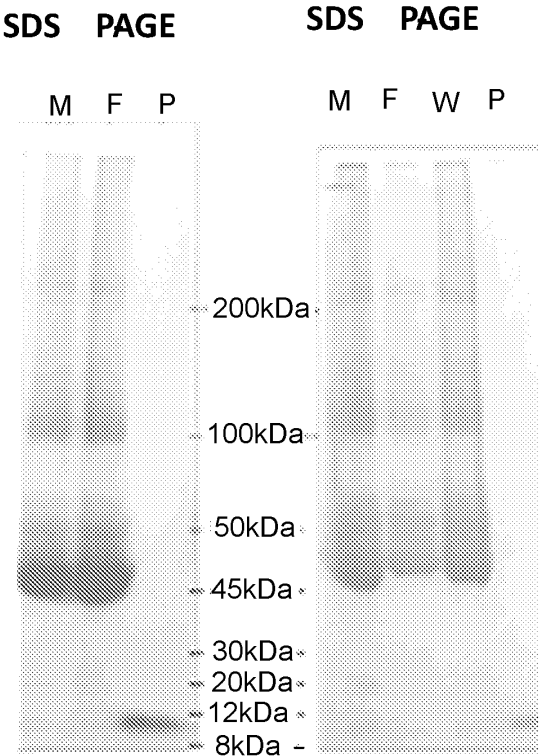
FIG. 2



Kr1Fc
FIG. 3A



K5Fc
FIG. 3B



Kr1
FIG. 3C

K5
FIG. 3D

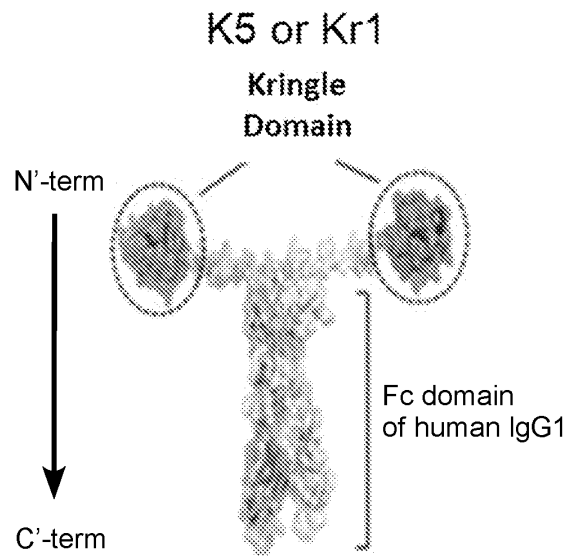


FIG. 3E

Protein Inhibitor Binding on Human GRP78

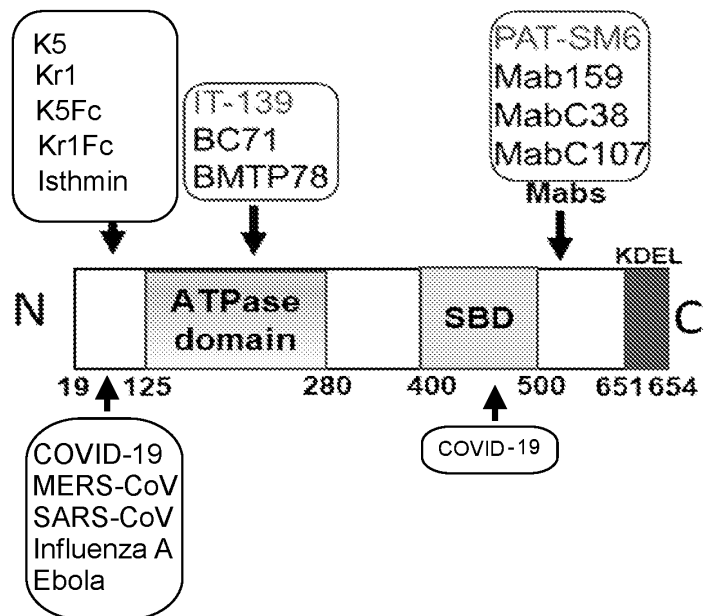
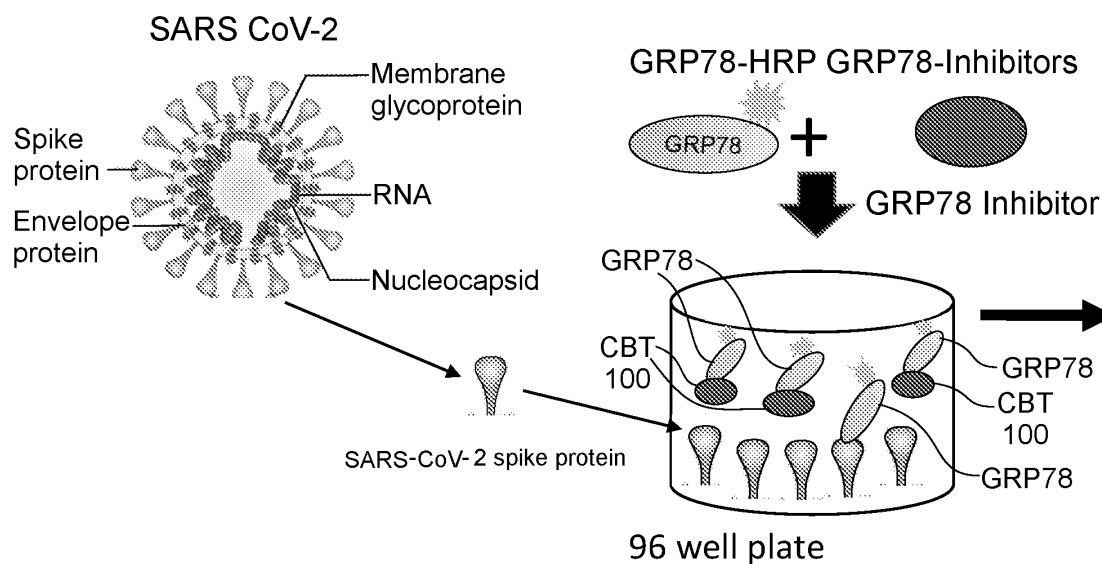


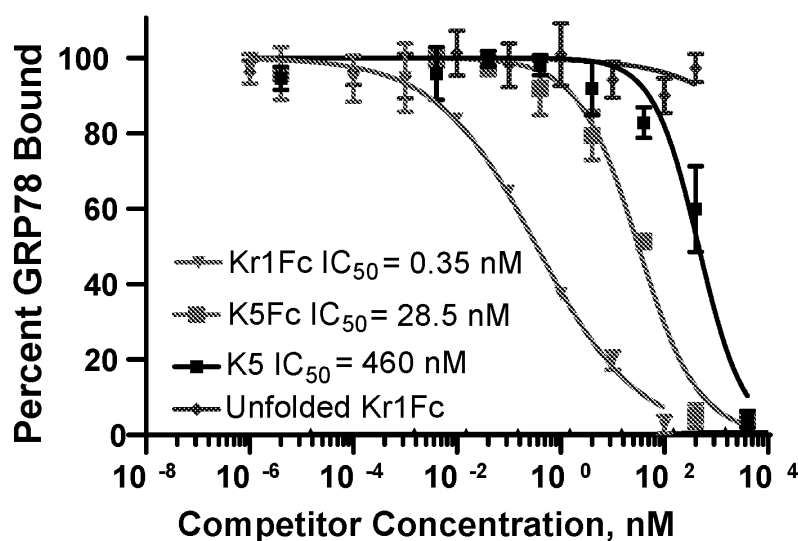
FIG. 3F

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Inhibition of GRP78 Binding to Spike Protein

**FIG. 4A**

Binding Inhibition of GRP78 to SARS-CoV-2 Spike Protein by Kr1Fc, K5Fc, K5 or Dead Kr1Fc

**FIG. 4B**

A549 Lung Cells Flow Cytometry Analysis of SARS-CoV-2
Spike Protein Binding Inhibition at 4C

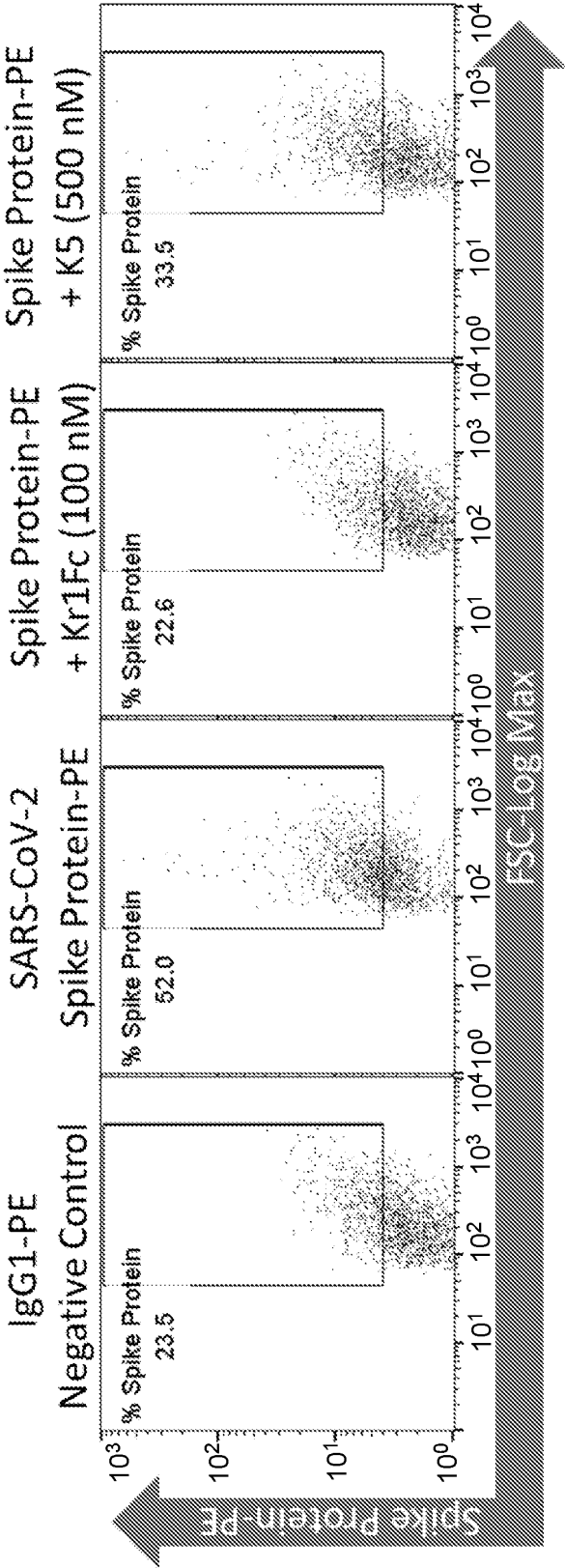


FIG. 5A

Histogram of SARS-CoV-2 Spike Protein Binding
Inhibition by GP78 Inhibitors

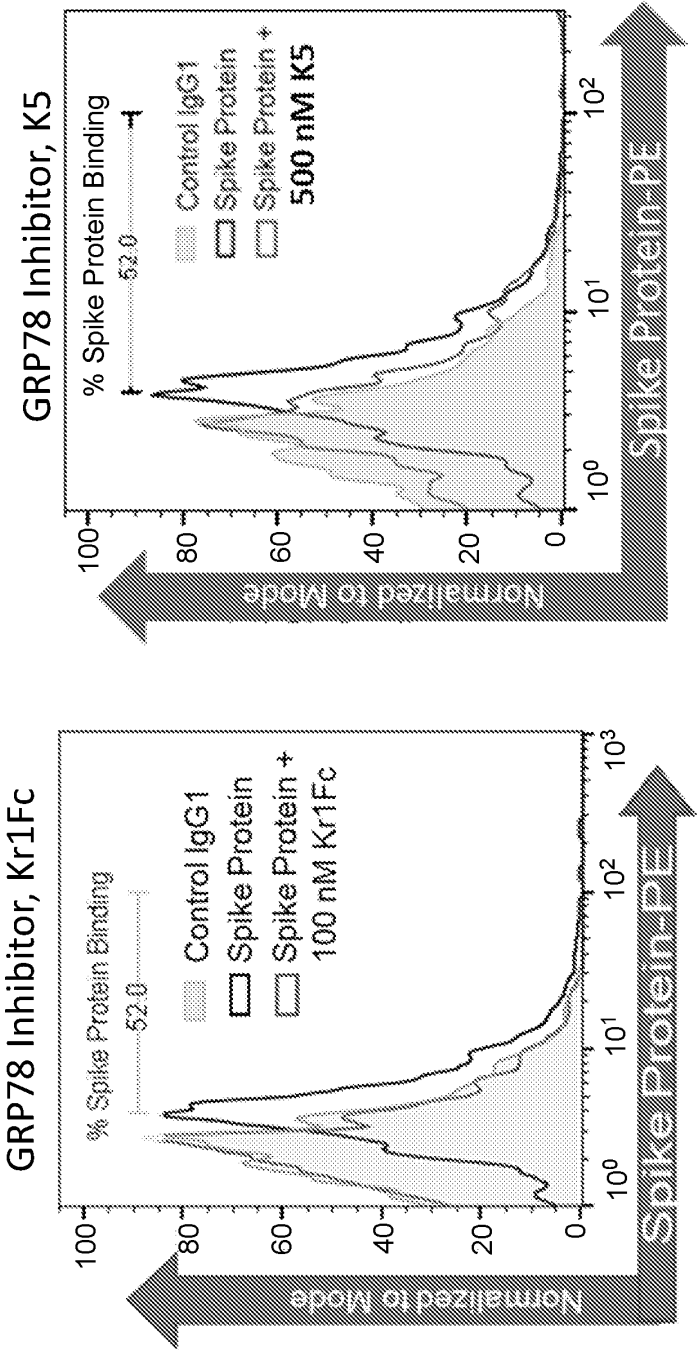


FIG. 5B

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Flow Cytometry Analysis of SARS-CoV-2 Spike Protein Binding to VERO Kidney Cells
added simultaneously with GRP78 inhibitors at 37C

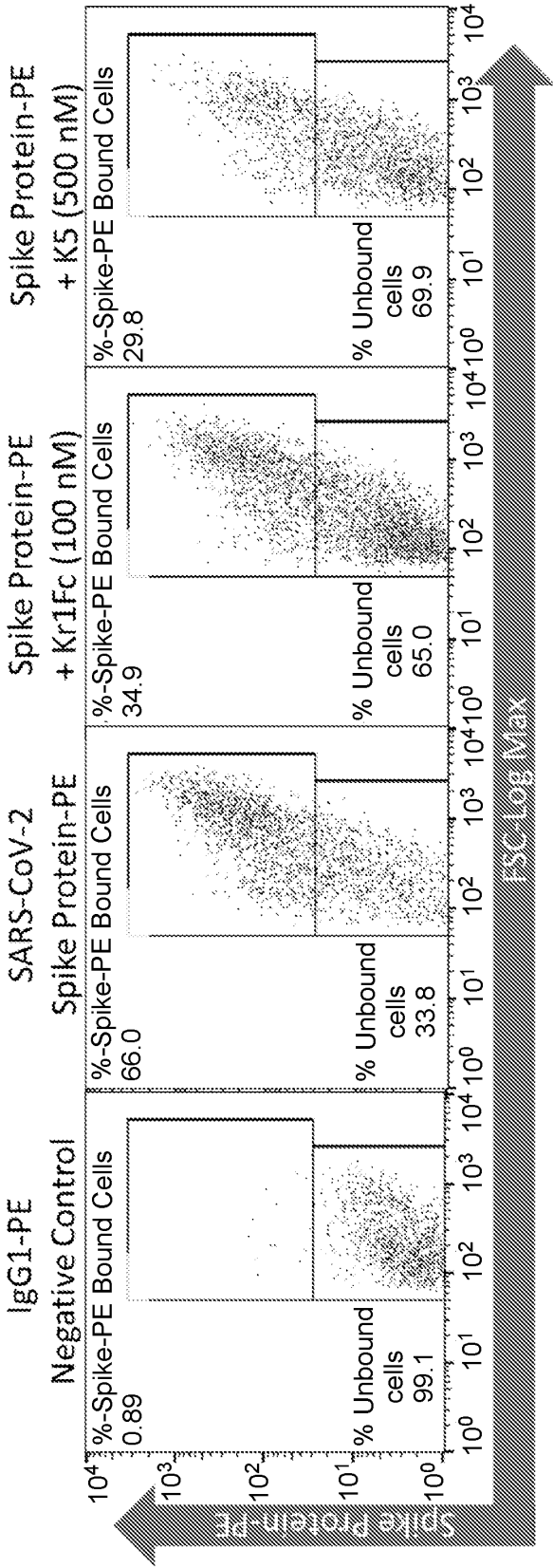


FIG. 6A

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Histogram Overlays of SARS-CoV-2 Spike Protein Binding and GPR78 Inhibitors

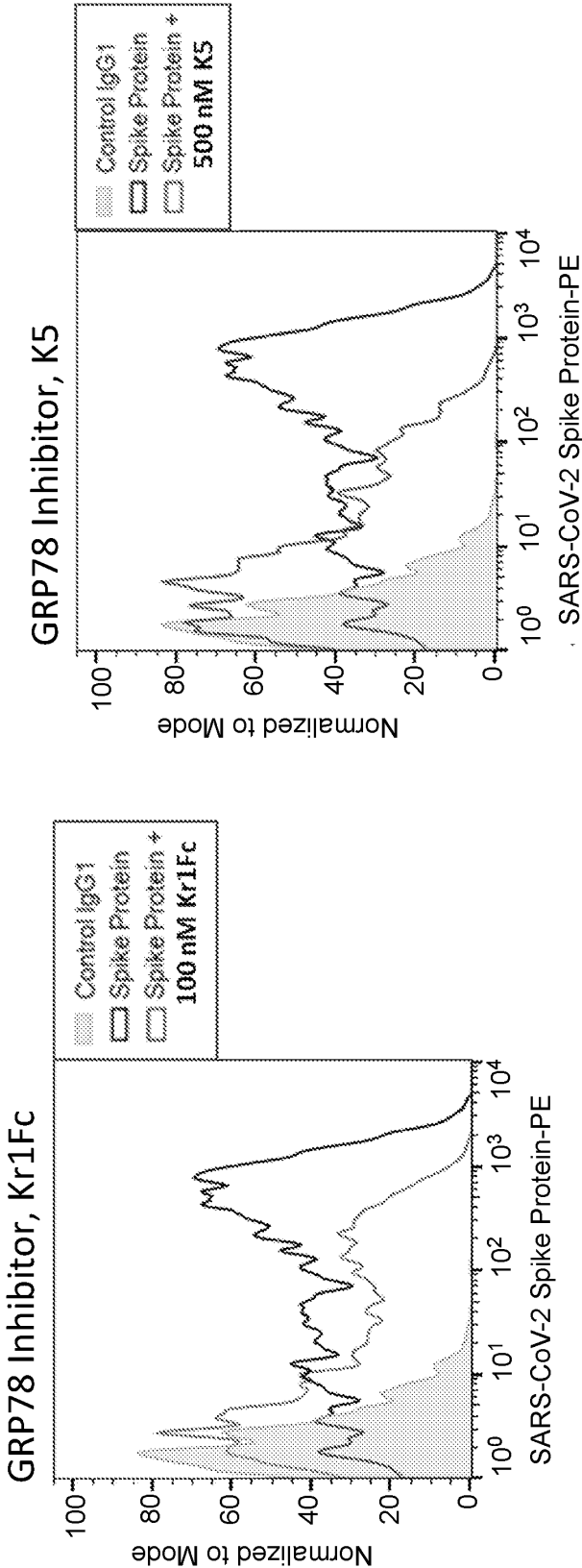


FIG. 6B

Flow Cytometry Analysis of SARS-CoV-2 Spike Protein Binding to VERO
Kidney Cells Pre-incubated for 6 hours with GRP78 Inhibitors at 37C

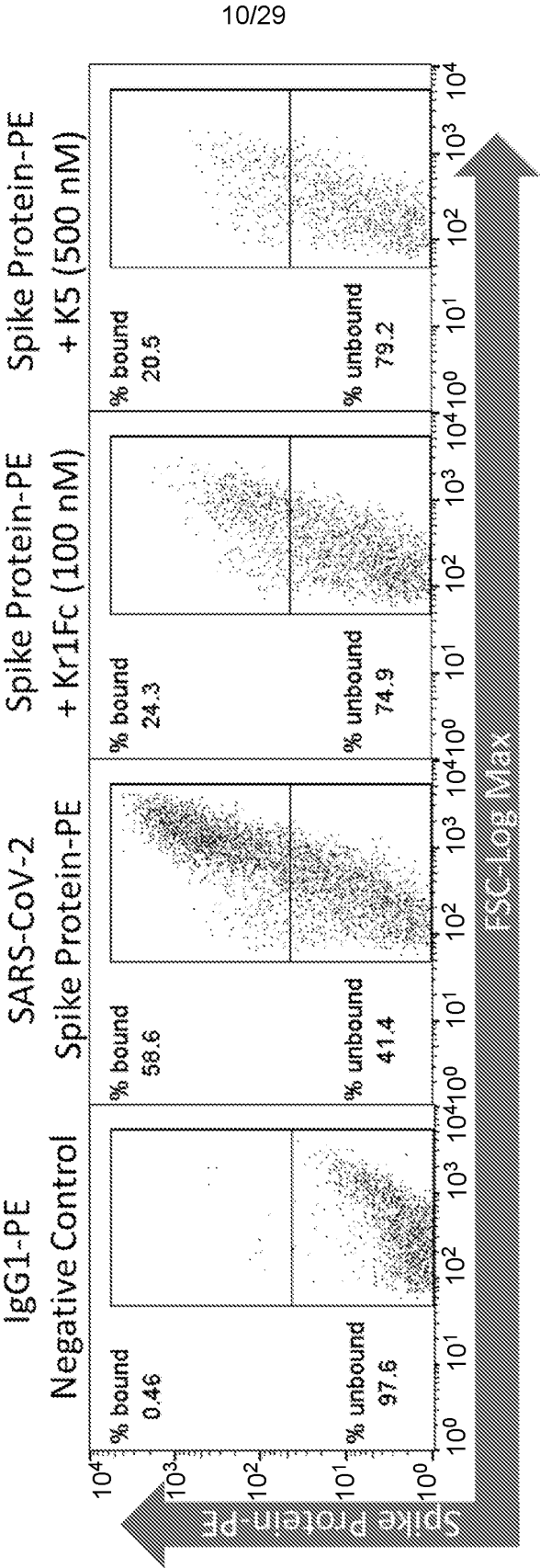


FIG. 7A

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Histogram Overlays of SARS-CoV-2 Spike Protein Binding and GPR78 Inhibitors

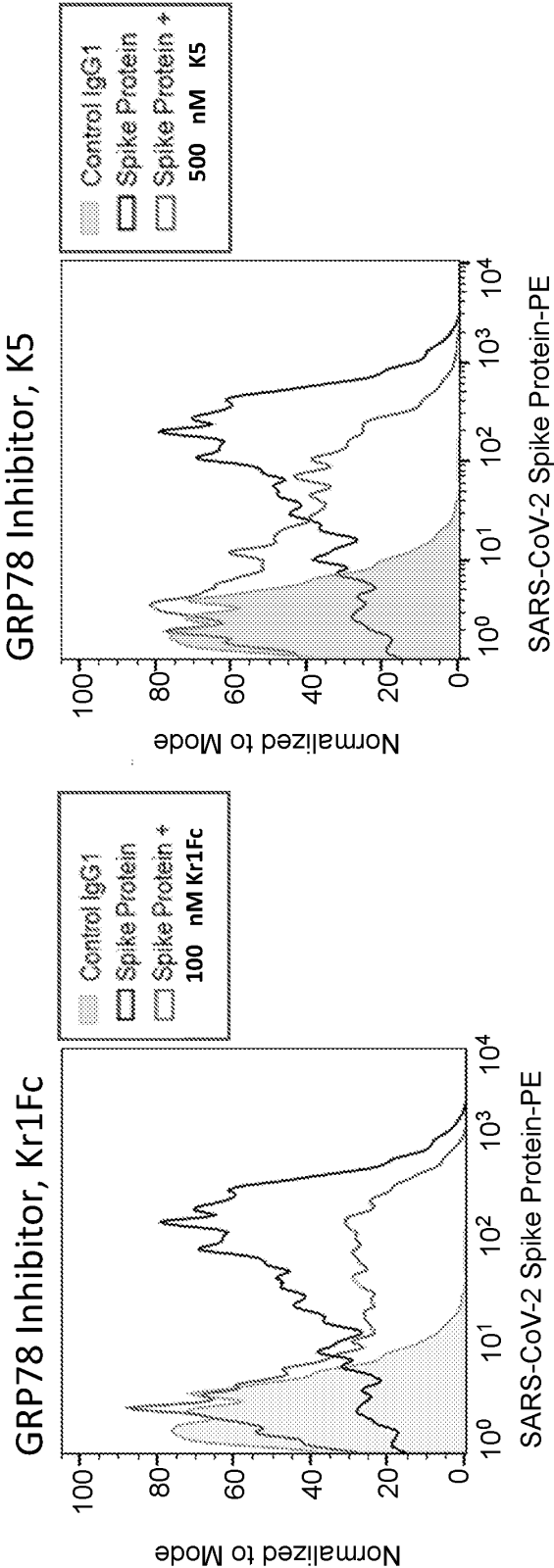


FIG. 7B

Flow Cytometry Analysis of Surface GRP78 Expressed on VERO
Cells with GRP78 Inhibitors at 37C for 48 hours

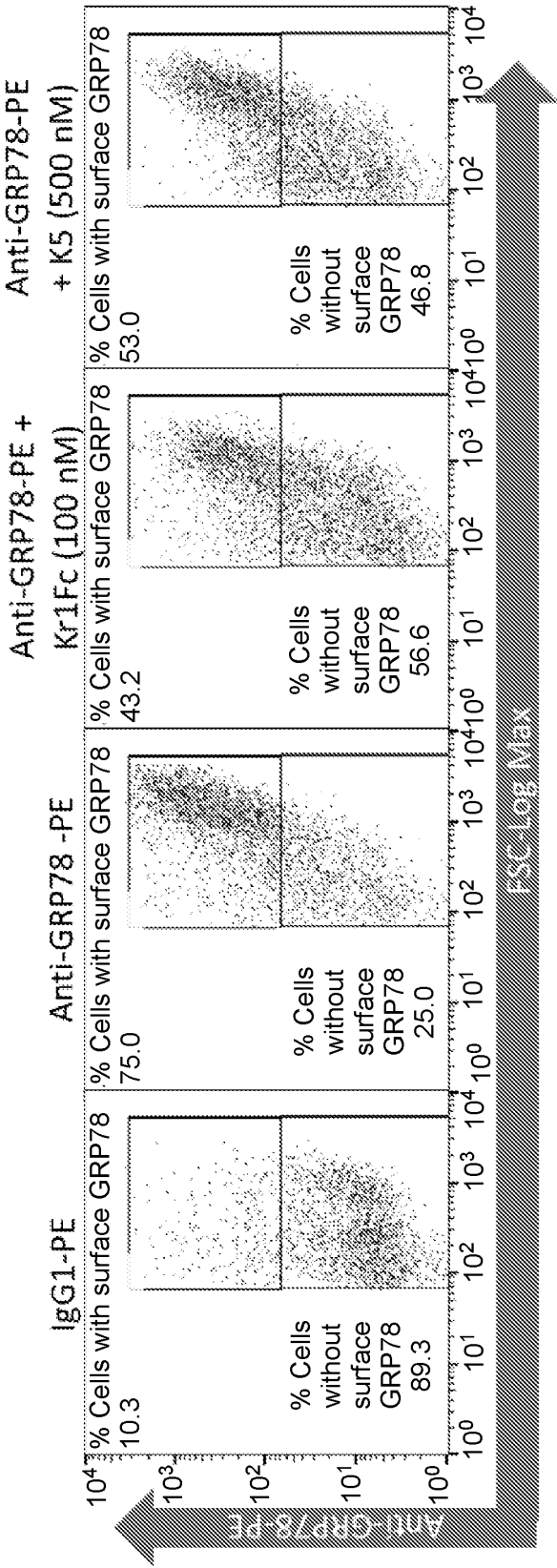


FIG. 8A

Histogram Overlays of Surface GRP78 on VERO cells with GRP78 Inhibitors

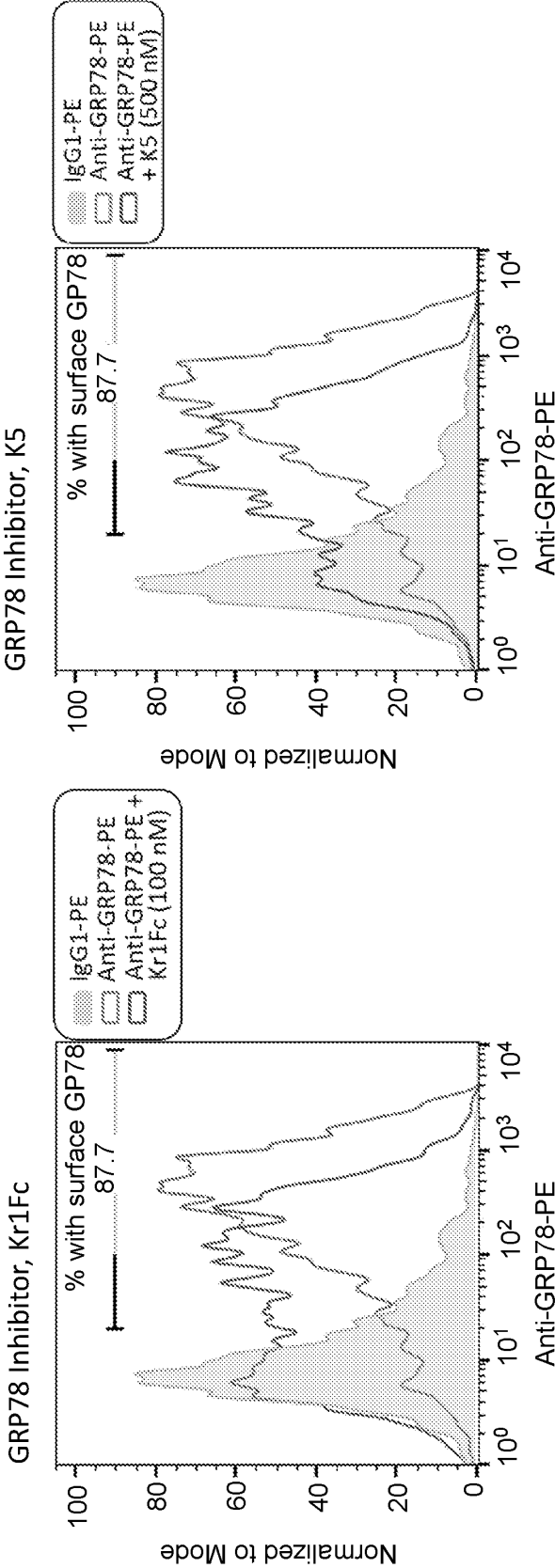


FIG. 8B

Flow Cytometry Analysis of Surface GRP78 Expressed on A549
Cells with GRP78 Inhibitors at 37C for 48 hours

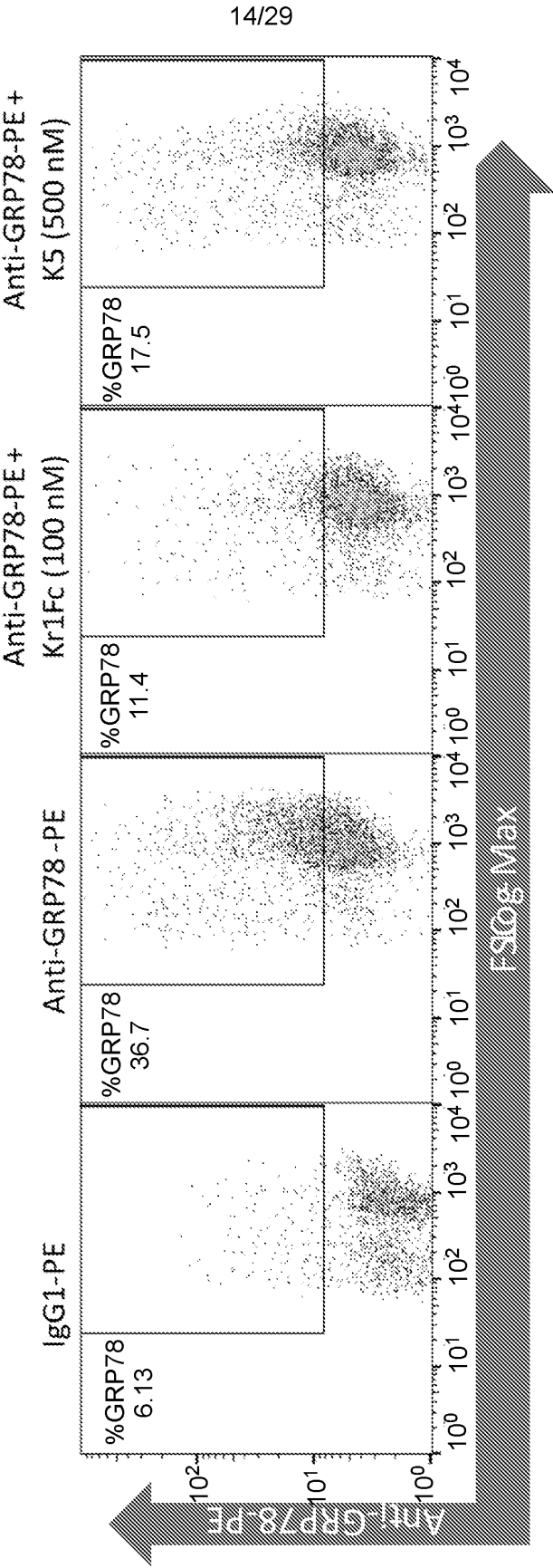


FIG. 9A

Histogram Overlays of Surface GRP78 on A549 cells with GRP78 Inhibitors

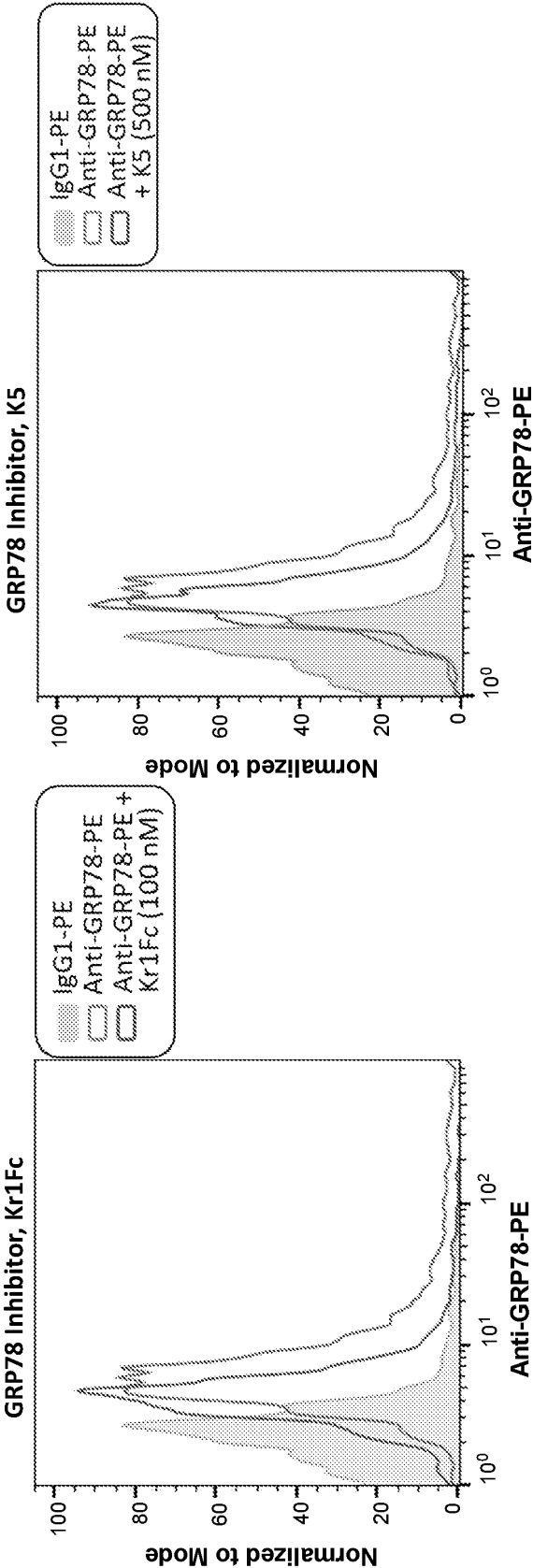
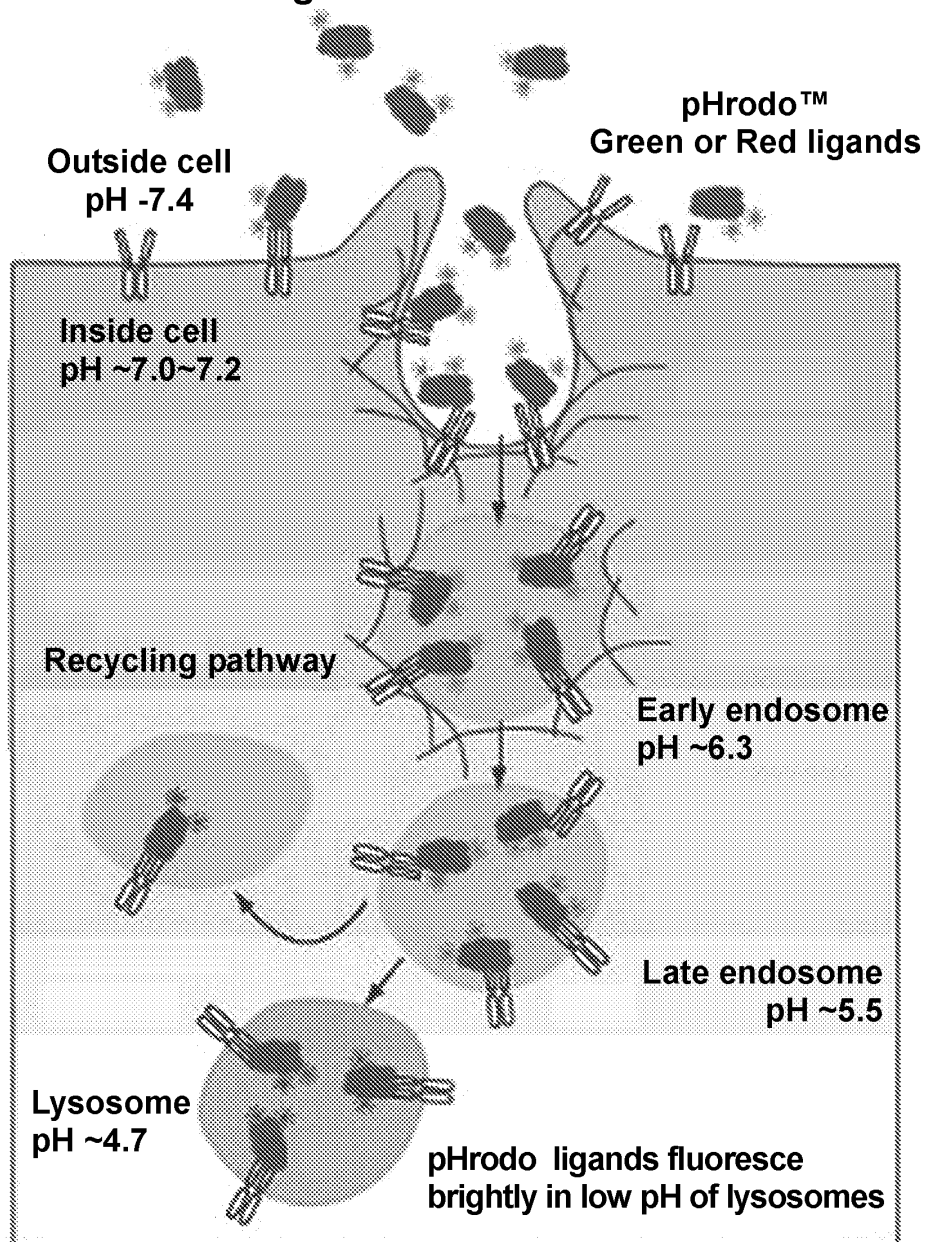


FIG. 9B

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Tracking the internalization of biomolecules
using pHrodo Green and pHrodo Red dye
Ligand internalization

**FIG. 10A**

Flow Cytometry Analysis of VERO cells treated with GP78 inhibition and pHrodo red labeled-Spike protein for 48 hours

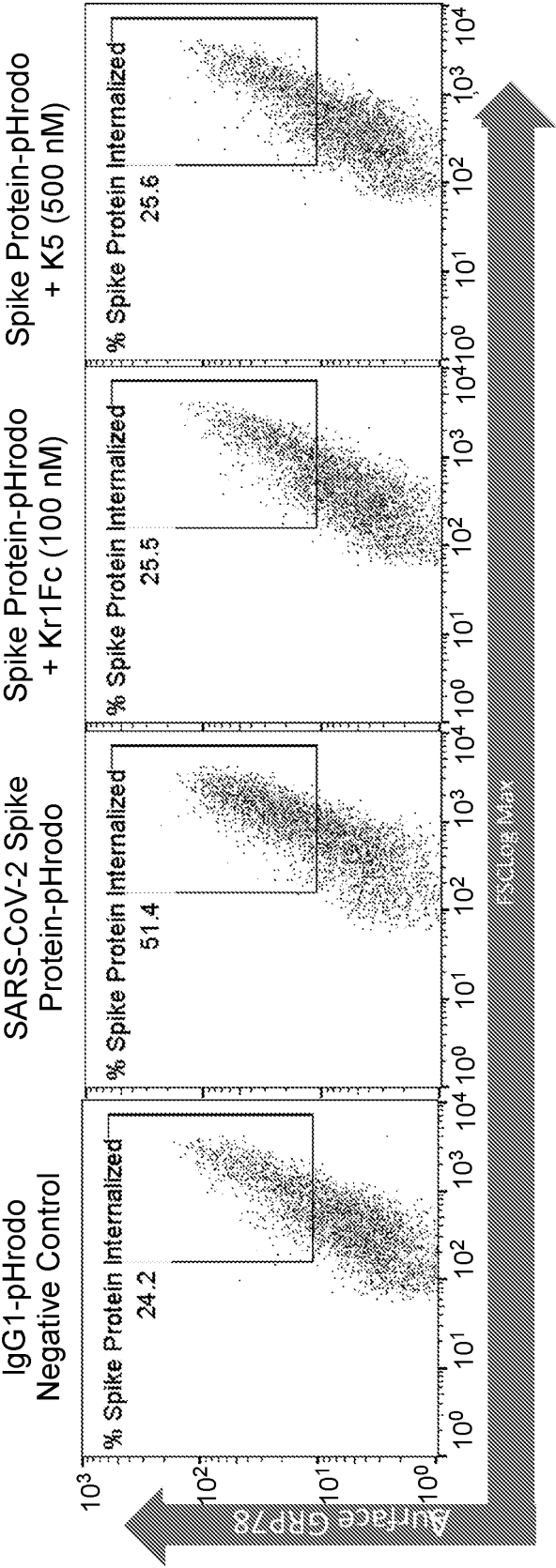


FIG. 10B

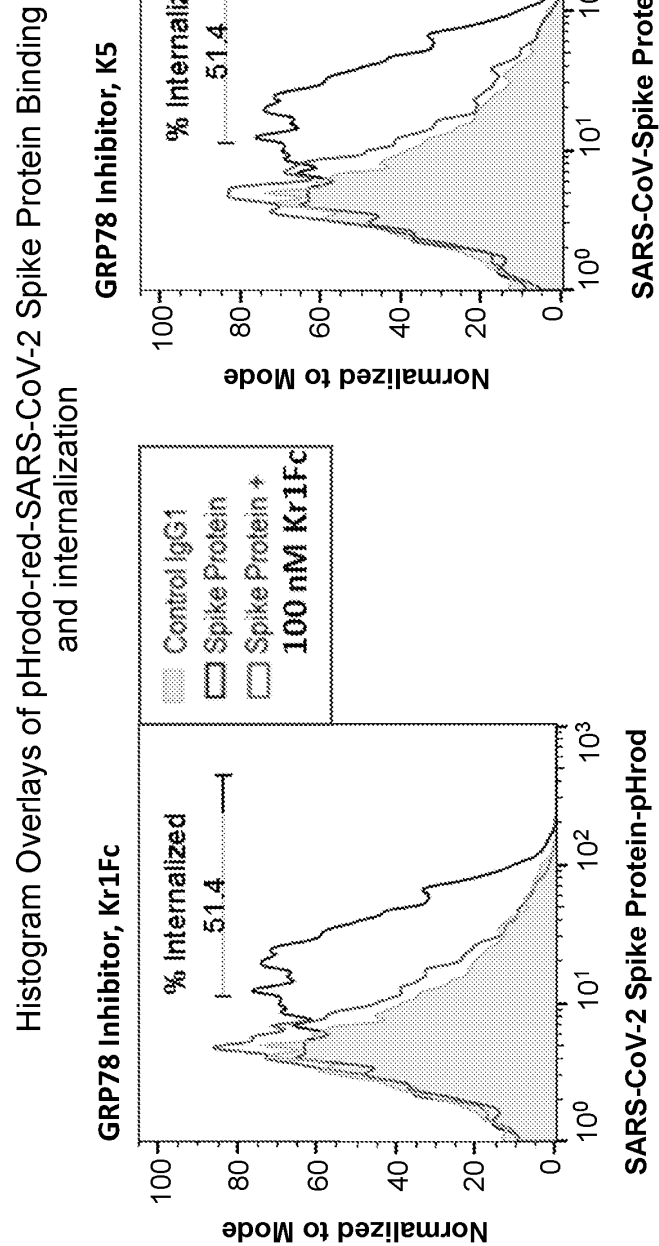


FIG. 10C

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SARS-CoV-2-Pseudotype Virus Inhibition Activity in Vero Cells with GRP78 Inhibitors

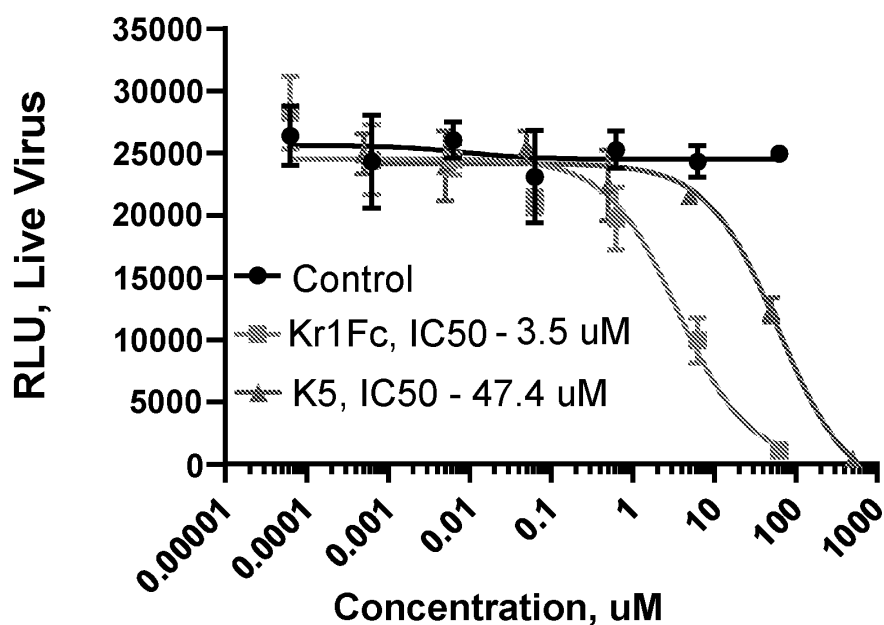


FIG. 11A

Vero Cells 5 Day Proliferation Assay with GRP78 Inhibitors (Kr1Fc, K5)

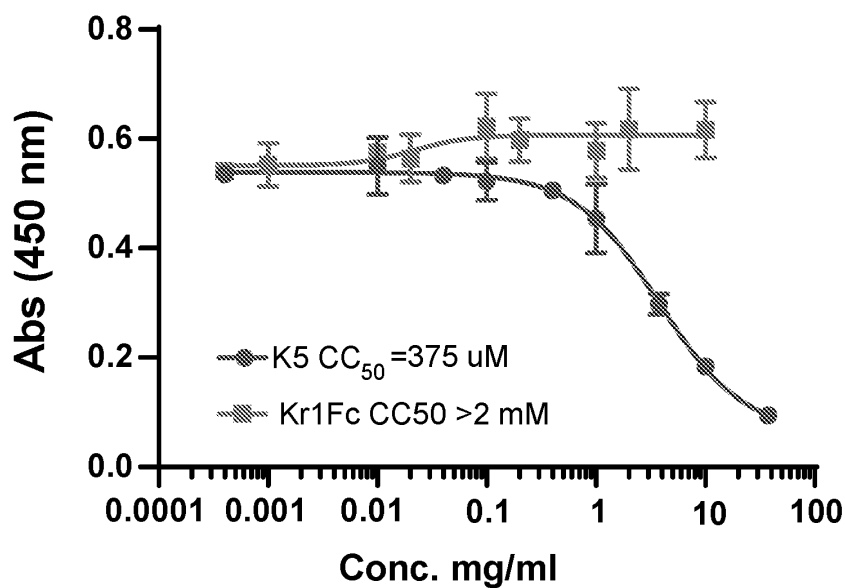


FIG. 11B

SUBSTITUTE SHEET (RULE 26)

Flow Cytometry Analysis of Checkpoint Proteins on A549 Cells with and without K5

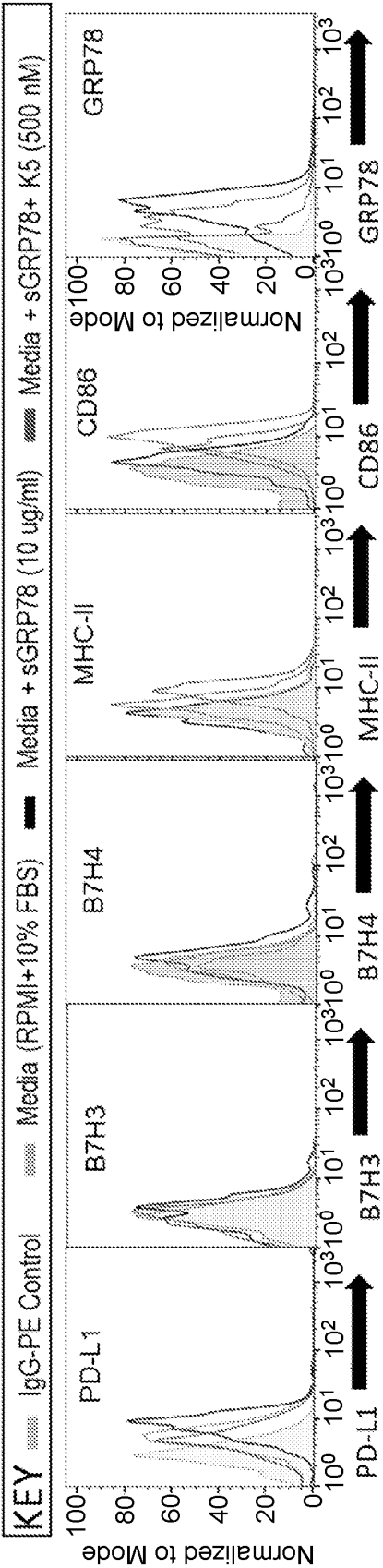
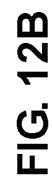


FIG. 12A

SUBSTITUTE SHEET (RULE 26)



Flow Cytometry Analysis of Checkpoint Proteins on A549 Cells
with and without Kr1Fc

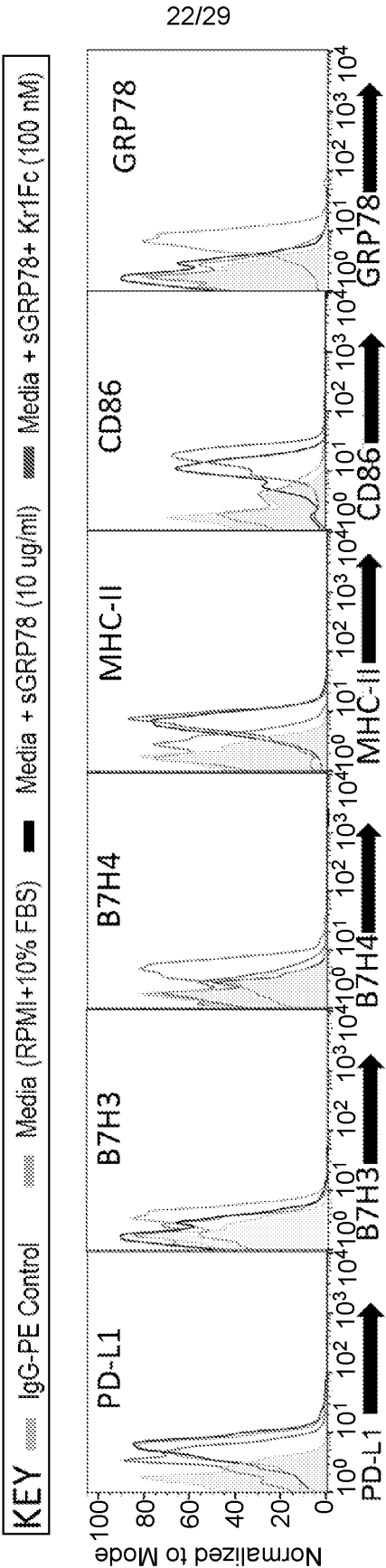


FIG. 13A

Kr1Fc Prevents Checkpoint Protein Expression
on A549 Lung Cells (n=3)

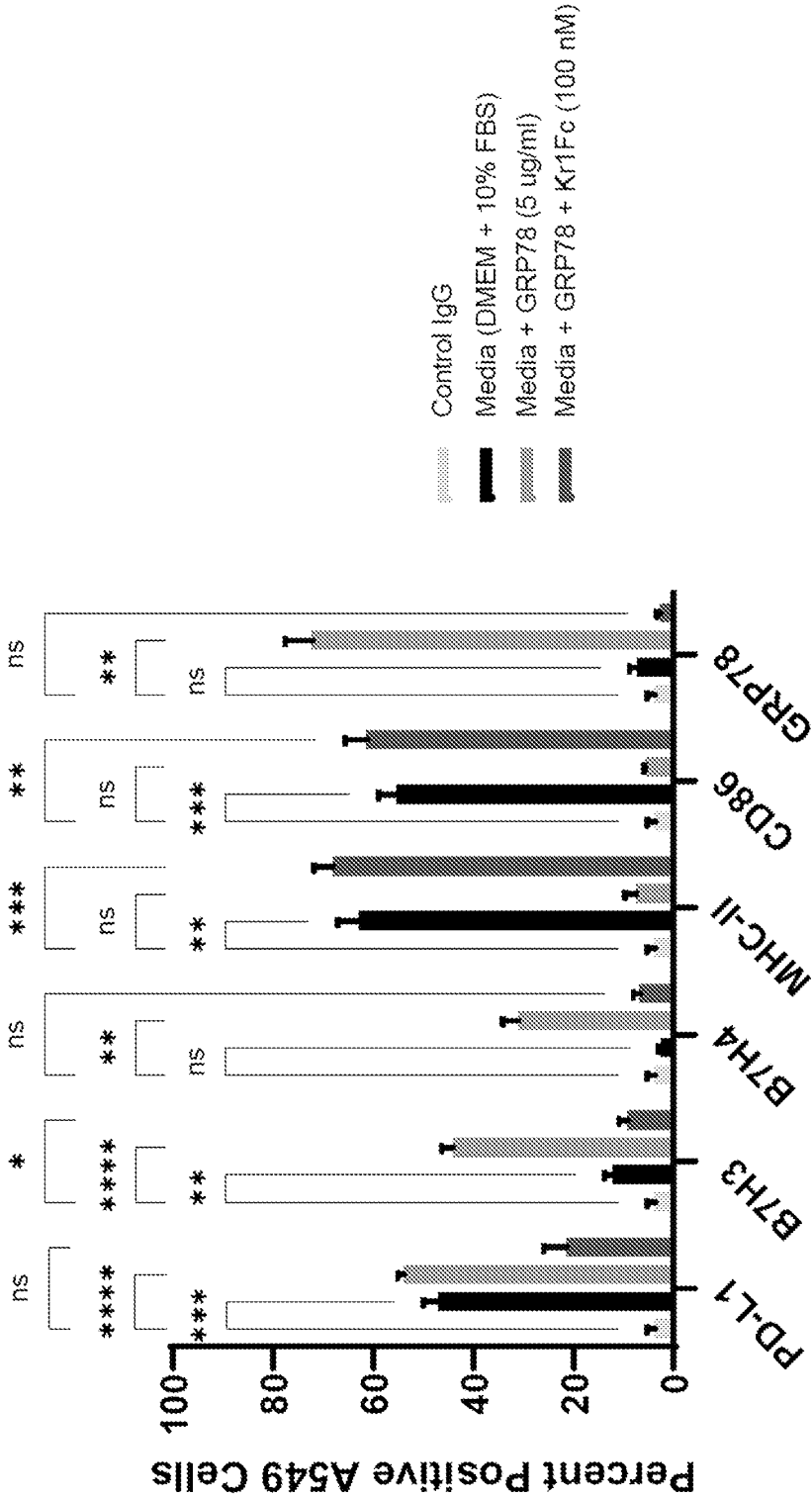


FIG. 13B

Cytokine Expression Induced by GRP78 on A549
Cells Inhibited by GRP78 Inhibitors

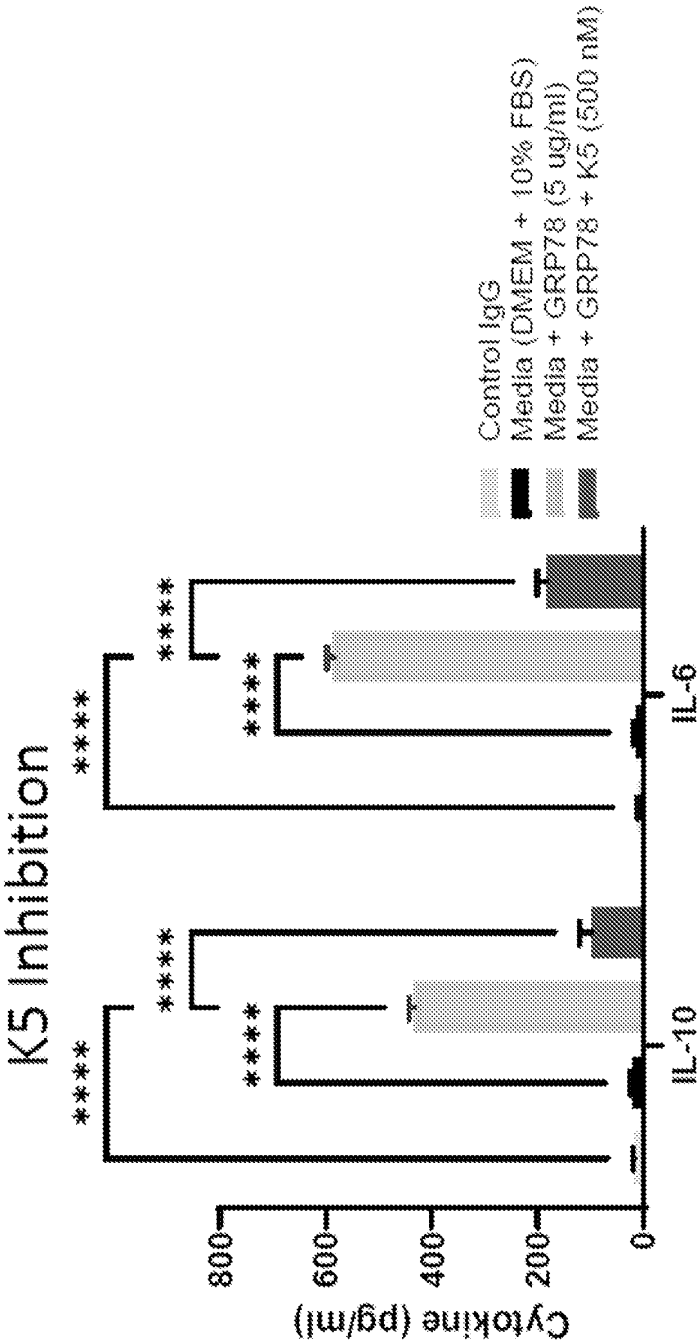


FIG. 14A

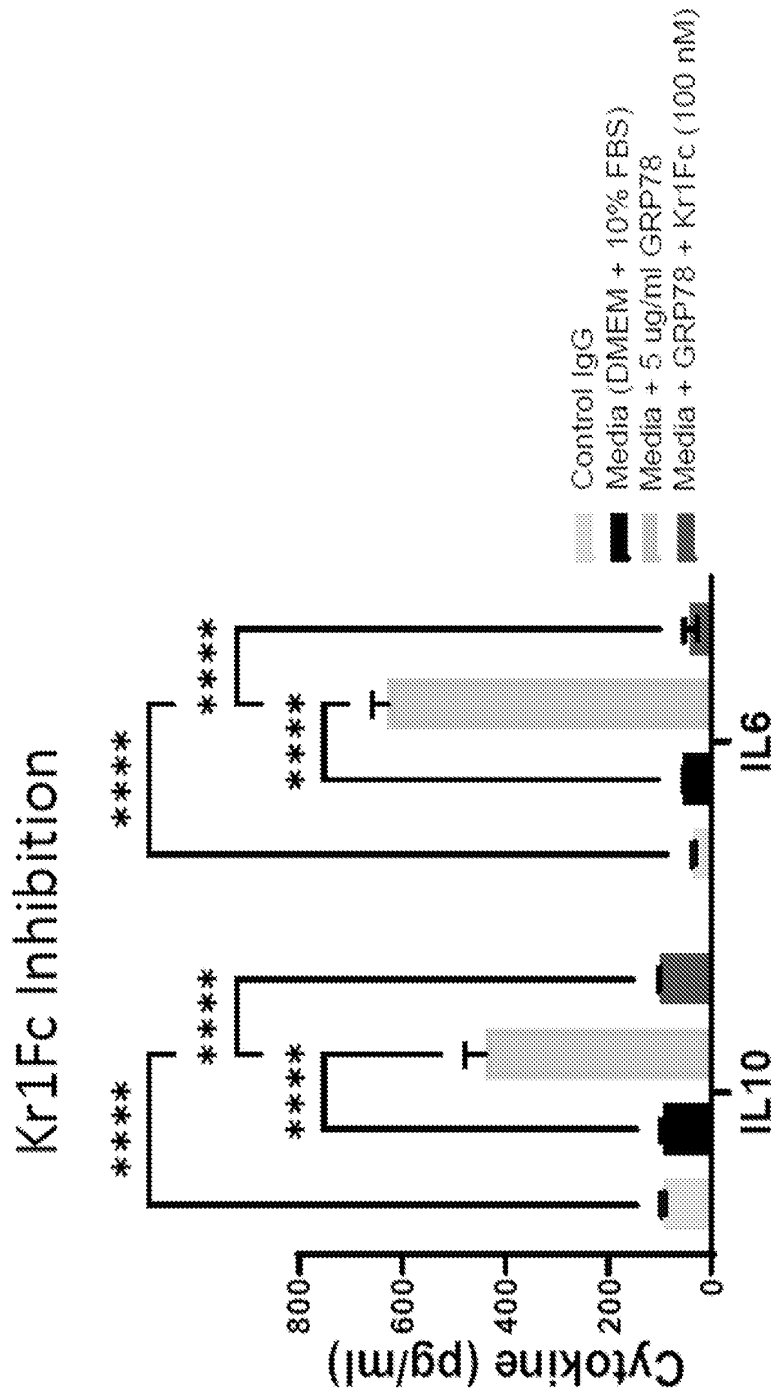
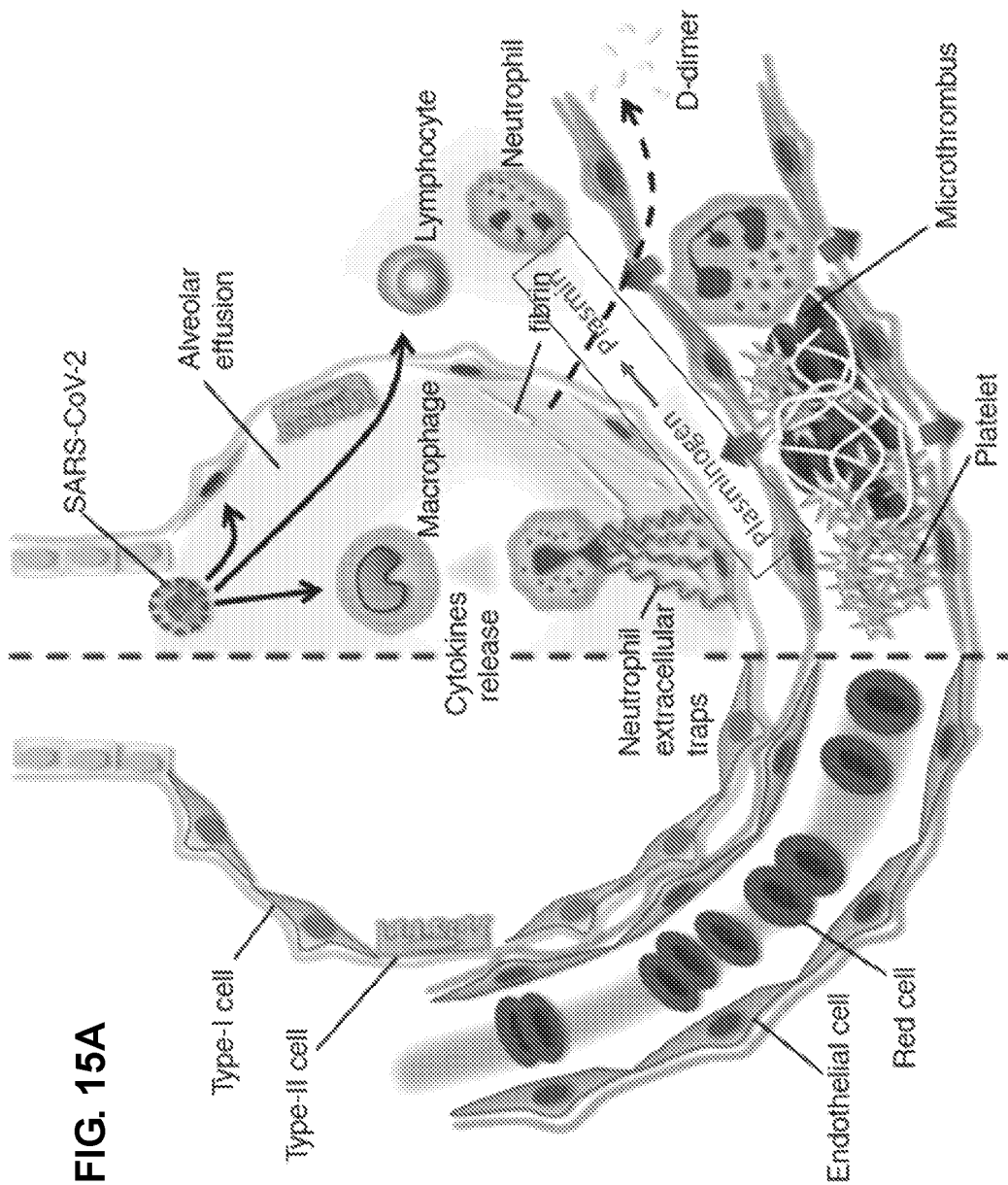


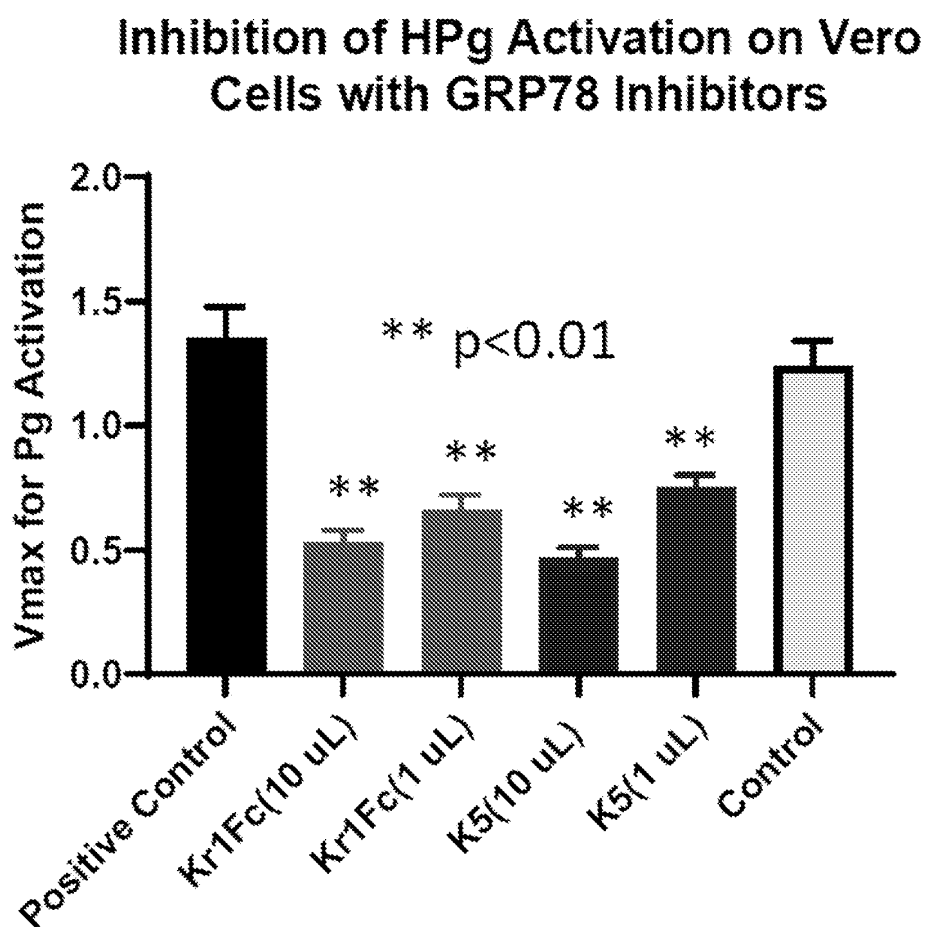
FIG. 14B



Adapted from Iba, T. et al. *J Thromb Haemost.* 2020;18:2103–2109

FIG. 15A

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**FIG. 15B**

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BALB/c Mice Toxicity Study Measuring Weight Loss for 22 Days of Dosing

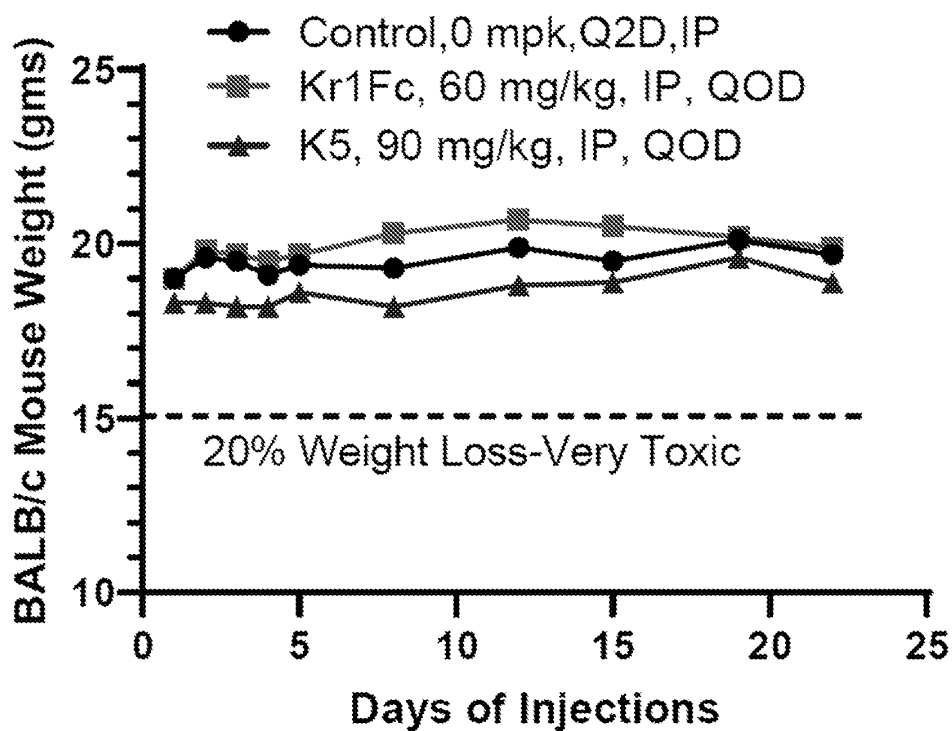


FIG. 16

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TABLE I	GRP78 Recognition Site														
Sequence Name	AA number	*					*		*					*	
Kringle 5 HPg	524	<u>C</u>	<u>Y</u>	<u>I</u>	<u>I</u>	<u>N</u>	<u>P</u>	<u>R</u>	<u>K</u>	.	<u>L</u>	<u>Y</u>	<u>D</u>	<u>Y</u>	<u>C</u>
KRINGLE 1 ROR1	379	<u>C</u>	<u>F</u>	<u>I</u>	.	.	<u>L</u>	<u>D</u>	<u>E</u>	<u>N</u>	<u>F</u>	.	<u>K</u>	<u>S</u>	<u>C</u>
SARS-CoV-2	480	<u>C</u>	.	.	.	<u>N</u>	<u>G</u>	<u>V</u>	<u>E</u>	.	<u>G</u>	<u>F</u>	<u>N</u>	.	<u>C</u>
SARS-CoV	453	<u>E</u>	<u>N</u>	<u>G</u>	<u>V</u>	<u>R</u>	<u>T</u>	<u>L</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>D</u>	<u>F</u>	<u>N</u>	<u>V</u>
MERS	526	<u>C</u>	<u>V</u>	<u>S</u>	<u>I</u>	<u>V</u>	<u>P</u>	<u>S</u>	<u>T</u>	.	<u>V</u>	<u>W</u>	<u>E</u>	<u>D</u>	<u>Y</u>
EBOLA	121	<u>C</u>	<u>L</u>	<u>P</u>	<u>A</u>	<u>A</u>	<u>P</u>	<u>D</u>	<u>G</u>	.	<u>I</u>	<u>R</u>	<u>G</u>	<u>F</u>	<u>C</u>
ZIKA	1074	<u>C</u>	.	.	.	<u>P</u>	<u>G</u>	<u>T</u>	<u>K</u>	.	<u>V</u>	<u>H</u>	<u>V</u>	<u>E</u>	<u>C</u>
INFLUENZA A		<u>C</u>	.	.	<u>S</u>	<u>N</u>	<u>G</u>	.	<u>S</u>	.	<u>L</u>	<u>Q</u>	.	.	<u>C</u>
DENGUE	1091	<u>C</u>	<u>T</u>	<u>L</u>	<u>P</u>	<u>P</u>	<u>L</u>	<u>R</u>	<u>Y</u>	<u>R</u>	<u>G</u>	<u>E</u>	<u>D</u>	<u>G</u>	<u>C</u>
JAPANESE ENCEPH	398	<u>C</u>	<u>G</u>	<u>L</u>	<u>F</u>	.	<u>G</u>	.	<u>K</u>	.	<u>G</u>	<u>S</u>	<u>I</u>	<u>D</u>	<u>C</u>
WEST NILE VIRUS	395	<u>C</u>	<u>G</u>	<u>L</u>	<u>F</u>	.	<u>G</u>	.	<u>K</u>	.	<u>G</u>	<u>S</u>	<u>I</u>	<u>D</u>	<u>C</u>
PEP42	558	<u>C</u>	<u>I</u>	<u>V</u>	<u>A</u>	<u>L</u>	<u>P</u>	<u>G</u>	.	.	<u>G</u>	<u>Y</u>	<u>V</u>	<u>R</u>	<u>C</u>
NL63	566	<u>C</u>	<u>F</u>	<u>S</u>	<u>I</u>	<u>V</u>	<u>A</u>	<u>V</u>	<u>P</u>	.	<u>G</u>	<u>S</u>	.	.	<u>C</u>
229E	385	<u>C</u>	<u>F</u>	<u>S</u>	<u>L</u>	<u>K</u>	<u>Y</u>	<u>I</u>	<u>P</u>	.	<u>G</u>	<u>G</u>	.	.	<u>C</u>
OC43	508	<u>C</u>	<u>V</u>	<u>G</u>	<u>S</u>	<u>G</u>	<u>P</u>	<u>G</u>	<u>K</u>	<u>N</u>	<u>N</u>	<u>G</u>	<u>I</u>	<u>G</u>	<u>C</u>
HKU1	484	<u>C</u>	<u>V</u>	<u>K</u>	<u>S</u>	<u>K</u>	<u>P</u>	.	.	.	<u>L</u>	<u>S</u>	<u>A</u>	<u>I</u>	<u>C</u>

FIG. 17