Appendix – Supplementary Material

Table of Contents

Figure Legends

Appendix Figure S1 - Western blot illustrating PEGSerp-1 binding to His labelled urokinase type plasminogen activator (uPA).
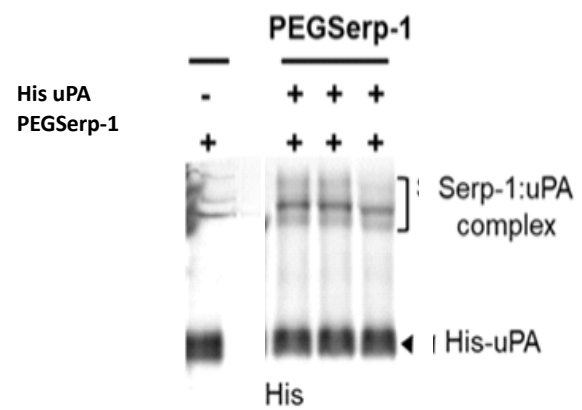
Appendix Figure S2 - Body weight measured after SARS-CoV-2 MA30 infection – Four day follow up with prophylactic PEGSerp-1 treatments (C57BL/6 mouse model). A. mean body weights for SARS MA30 infected mice with and without PEGSerp-1 treatment demonstrates significantly improved weight gain on days 4 and 4 with PEGSerp-1 treatment (Red) given daily when compared to saline controls (Black).
B. Individual weights measured for each mouse over the 4 day follow up. N = 19 mice. Student's T test - * $p < 0.05$, ** $p < 0.01$

Appendix Table S1 - Immunoprecipitation of PEGserp-1 bound molecules as measured by mass spectrometry demonstrating pull down of
 thrombolytic and complement proteases. Immunoprecipitation of PEGSerp-1 bound proteins form a lupuds lung hemorrhage model (Guo 2021).
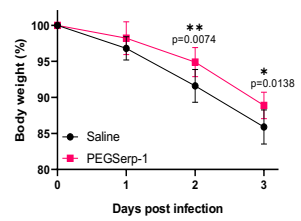
Appendix Table S2 - Primer sequences used for qPCR analyses of SARS-CoV-2 infected lung and heart extracts.

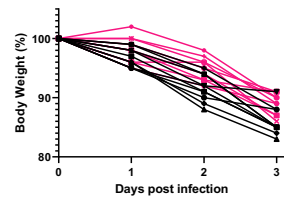**Appendix Figure S1**

His uPA
PEGSerp-1

Appendix Figure S2. Prophylactic PEGSerp-1 treatments in SARS-CoV-2 MA30 Day 4 follow up

A. Mean body weight

B. Individual Mean body weights

Appendix Table S1- MS analysis DAH PEG Serp-1 Immunopresipitation (IP)

Accession	Description	Symbol	# Peptides
P01027	Complement C3	C3 PE	34
B7FAV1	Filamin, alpha	Flna PE	23
P60710	Actin, cytoplasmic 1	Actb PE	17
E9PV24	Fibrinogen alpha chain	Fga PE	12
P20918	Plasminogen	Plg PE	11
P01029	Complement C4-B	C4b PE	9
P98086	Complement C1q subunit A	C1qa PE	4
P04186	Complement factor B	Cfb PE	4
Q8CG14	Complement C1s-A	C1sa PE	4
P14106	Complement C1q subunit B	C1qb PE	3
Q8CG16	Complement C1r-A	C1ra PE	3
Q02105	Complement C1q subunit C	C1qc PE	2

*Average Xcorr >4.0

Appendix Table S2 - Primer Sequences for qPCR

Gene	Primers
MCP-1F	CTCACCTGCTGCTACTCATTC
MCP-1R	ACTACAGCTTCTTTGGGACAC
Fxa-F	GGAACACAGAGAAGGAAGAAGG
Fxa-R	CTCAGCACGGCGATATCATAG
GAPDH-F	CATCACTGCCACCCAGAAGACTG
GAPDH-R	ATGCCAGTGAGCTTCCCGTTCAG
GzmB-F	GGCGCAATGTCAATGTGAAG
GzmB-R	CTGTCAGCTCAACCTCTTGTAG
IL-10F	ACAGCCGGGAAGACAATAAC
IL-10R	CAGCTGGTCCTTTGTTTGAAAG
IL-1bF	GCAACTGTTCCTGAACTCAACT
IL-1bR	ATCTTTTGGGGTCCGTCAACT
IL-6F	GATAAGCTGGAGTCACAGAAGG
IL-6R	TTGCCGAGTAGATCTCAAAGTG
MMP2F	GTTCAACGGTCGGGAATACA
MMP2R	GCCATACTTGCCATCCTTCT
MMP9F	TGCACTGGGCTTAGATCATTC
MMP9R	TGCCGTCTATGTCGTCTTTATTC
Neuroserpin-F	TTCCTCTCCAAAGCTGTTCAC
Neuroserpin-R	CAGCACAGCCATCCTACTAATC
PAI-1F	CTCCACAGCCTTTGTCATCT
PAI-1R	ATTGTCTCTGTCGGGTTGTG
PAR2/F2rl1-F	TTAGAAACCCAGCCTCCAATC
PAR2/F2rl1-R	AATGTAGACGACCGGAAGAAAG
TGFb1-F	GGTGGTATACTGAGACACCTTG
TGFb1-R	CCCAAGGAAAGGTAGGTGATAG
TNF-F	TTGTCTACTCCCAGGTTCTCT
TNF-R	GAGGTTGACTTTCTCCTGGTATG
TPA-F	GGGAATACATGGGAGGTTCAG
TPA-R	GACTGGTGCTGTTGGTAAGT
UPA-F	CGCACACTGCTTCATTCAAC
UPA-R	GCTCCACCTCAAACTTCATCT
UPAR-F	GAGCTTGAAGGATGAGGACTAC
UPAR-R	TTCAGGAAGTGAAAGGTCTGG
VEGF-F	CACTTCCAGAAACACGACAAAC
VEGF-R	TGGAACCGGCATCTTTATCTC
C1INH-F	GCTGAGAACACCAACCATAAGA
C1INH-R	CCACTTGGCACTCAAGTAGAC