Applied Microbiology and Biotechnology

Supplementary Material

Development of antibodies against severe fever with thrombocytopenia syndrome virus nucleopro

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Table S1. Codon-optimized/synthetic NP sequences

NP (nucleotides)	ATGAGCGAGTGGAGCAGAATCGCCGTGGAGTTCGGCGAGCAGCAGCTGAACCTGACCGAGC TGGAGGACTTCGCTAGAGAGCTGGCCTACGAGGGCCTGGACCCCGCCCTGATCATCAAGAA GCTGAAGGAGACCGGCGGCGACGACTGGGTGAGAGACACCAAGTTCATCATCGTGTTCGCC CTGACAAGAGGCAACAAGATCGTGAAGGCTAGCGGCAAGATGAGCAACAGCGGCAGCAAGA GACTGATGGCCCTGCAAGAGAAGTACGGCCTGGTGGAGAGAGCCGAGACAAGACTGAGCAT TACCCCTGTAAGAGTTGCTCAGAGCCTACCTACCTGGACGTGCGCCGCAGCGGCCGCTTTGA AGGAGTACCTGCCCGTGGGCCCCGCCGTGATGAACCTGAAGGTGGAGAACTACCCCCCCGA GATGATGTGCATGGCCTTCGGCAGCCTGATCCCCACCGCCGGCGTGAGCGAGGCCACCACC AAGACCCTGATGGAGGCCTACAGCCTGTGGCAAGACGCCTTCACCAAGACCATCAACGTGAA GATGAGAGGCGCTAGCAAGACCGAGGTGTACAACAGCTTCAGAGACCCCCTGCACGCCGCC GTGAACAGCGTGTTCTTCCCCAACGACGTGAGAGTGAAGTGGCTGAAAGCCAAAGGCATATT GGGCCCCGACGGCGTCCCGAGCAGAGCCGCCGAGGTGGCCGCCGCCGCCTACAGAAACCT G
NP (amino acids)	MSEWSRIAVEFGEQQLNLTELEDFARELAYEGLDPALIIKKLKETGGDDWVRDTKFIIVFALTRGNK IVKASGKMSNSGSKRLMALQEKYGLVERAETRLSITPVRVAQSLPTWTCAAAAALKEYLPVGPAV MNLKVENYPPEMMCMAFGSLIPTAGVSEATTKTLMEAYSLWQDAFTKTINVKMRGASKTEVYNSF RDPLHAAVNSVFFPNDVRVKWLKAKGILGPDGVPSRAAEVAAAAYRNL

Table S2. Antibodies used in this study

Antibodies (source)	Source	Cat#	Company	Use	RRID
Anti-HIS-HRP	Rabbit	ab1187	Abcam, Cambridge, UK	WB (1:1000)	AB_298652
Anti-HA-HRP	Rat	12013819001	Roche, Basel, Switzerland	ELISA (1:2500)	AB_390917
Peroxidase AffiniPure goat anti-human IgG (H+L)	Goat	109-035-088	Jackson ImmunoResearch, West Grove, PA, USA	ELISA (1:1000~5000)	AB_2337584
Anti-human FC-HRP	Goat	ab98624	Abcam, Cambridge, UK	ELISA (1:1000~5000)	AB_10673832
Anti-mouse IgG, HRP-linked antibody	Horse	7076	Cell Signaling Technology, Danvers, MA, USA	ELISA (1:1000~5000)	AB_330924

Abbreviations:
WB, Western blot
ELISA, enzyme-linked immunosorbent assay

Table S3. scFv sequences identified in this study

Candidate scFv	VH (nucleotides)	VL (nucleotides)		VH (amino acids)	VL (amino acids)
P01-A05	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGACTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGTGATTATGCTATGAGC TGGGTCCGCCAGGCCCCAGGGAAGGGGCTGGAGT GGGTCTCAGGGATCTCTTATAGTGGTAGTAGTAAA TATTACGCTGATTCTGTAAAAGGTCGGTTCACCATC TCCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAAAGATCGTGGGACTCCGCGGGT GAGGGTTTTCGACTACTGGGGCCAGGGTACACTG GTCACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTAGTG GCTCTTCATCTAATATTGGCAGTAATGCTGTCTCCT GGTACCAGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATGCTAATAGTCAGCGGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGGTACTTGGGATTC TAGCCTGAGTGGTTATGTCTTCGGCGGAGGCACCA AGCTGACGGTCCTA		EVQLLESGGGLVQTGGSLRLSCAASGFT FSDYAMSWVRQAPGKGLEWVSGISYS GSSKYYADSVKGRFTISRDNSKNTLYLQ MNSLRAEDTAVYYCAKDRGTPRVRVF DYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCSGSSSNI GSNAVSWYQQLPGTAPKLLIYANSQRP SGVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGTWDSSLSGYVFGGGTKLTVL
P01-B10	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCAATTATGCTATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCAGTGATCTCTCCTGGTAGTGGTAGTAAA TATTACGCTGATTCTGTAAGAGGTCGGTTCACCGTC TCCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAGAGATGGAATTCTTAAGTCGCG GCCGCTTTTCGACTACTGGGGCCAGGGTACACTGG TCACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTACTG GCTCTTCATCTAATATTGGCAATAATACTGTCAACT GGTACCAGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATCATGATAGTCATCCGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGGTGCTTGGGATT CTAGCCTGAGTGGTTATGTCTTCGGCGGAGGCACC AAGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSNYAMSWVRQAPGKGLEWVSVISP GSGSKYYADSVRGRFTVSRDNSKNTLY LQMNSLRAEDTAVYYCARDGILKSRPL FDYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCTGSSSNI GNNTVNWYQQLPGTAPKLLIYHDSHPP SGVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGAWDSSLSGYVFGGGTKLTVL
P01-F08	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCGATTATGCTATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCAGGGATCTCTTATGGTGGTGGTAGTACA TATTACGCTGATTCTGTAAAAGGTCGGTTCACCATC TCCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAGATCTCCGAGGGGTTTCGACTA CTGGGGCCAGGGTACACTGGTCACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTAGTG GCTCTTCATCTAATATTGGCAGTAATTATGTCTCCT GGTACCAGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATGCTGATAGTCAGCGGCCAAGCGGG GTCCCTGACCGATTCTCTGGCTCCAAGTCTGGCAC CTCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCG AGGATGAGGCTGATTATTACTGTGGTACTTGGGAT TCTAGCCTGAATGGTTATGCCTTCGGCGGAGGCAC CAAGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSDYAMSWVRQAPGKGLEWVSGISY GGGSTYYADSVKGRFTISRDNSKNTLYL QMNSLRAEDTAVYYCARSPRGFDYW GQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCGSSSNI GSNYVSWYQQLPGTAPKLLIYADSQRP SGVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGTWDSSLNGYAFGGGTKLTVL
P02-E04	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCAGTTATGATATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCAGGGATCTCTCATGGTGGTAGTAGTACA TATTACGCTGATTCTGTAAAAGGTCGGTTCACCATC TCCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAAAGATCTTAATTTTCTGCATCTG TTGCTGTTCGACTACTGGGGCCAGGGTACACTGGT CACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTACTG GCTCTTCATCTAATATTGGCAGTAATTATGTCTCCT GGTACCGGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATTCTGATAGTAATCGGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGCTACTTGGGATG CTAGCCTGAGTGCTTATGTCTTCGGCGGAGGCACC AAGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSSYDMSWVRQAPGKGLEWVSGISH GGSSTYYADSVKGRFTISRDNSKNTLYL QMNSLRAEDTAVYYCAKDLNFLHLLLF DYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCTGSSSNI GSNYVSWYRQLPGTAPKLLIYSDSNRPS GVPDRFSGSKSGTSASLAISGLRSEDEA DYYCATWDASLSAYVFGGGTKLTVL
P04-D08	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCGATTATGCTATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCAGGGATCTCTTATAGTGGTGGTAGTACA TATTACGCTGATTCTGTAAAAGGTCGGTTCACCATC TCCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAAAGATGGTGCTACTAGTAAGTTT CCGGCTTTCGACTACTGGGGCCAGGGTACACTGGT CACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTAGTG GCTCTTCATCTAATATTGGCAGTAATGCTGTCTCCT GGTACCAGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATGATAATAATCATCGGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGGTACTTGGGATG ATAGCCTGAGTGGTTATGTCTTCGGCGGAGGCACC AAGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSDYAMSWVRQAPGKGLEWVSGISY SGGSTYYADSVKGRFTISRDNSKNTLYL QMNSLRAEDTAVYYCAKDGATSKFPA FDYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCSGSSSNI GSNAVSWYQQLPGTAPKLLIYDNNHRP SGVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGTWDDSLSGYVFGGGTKLTVL
P05-D07	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCAATTATGATATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCATCGATCTATCCTAATGGTAGTAGTAAAT ATTACGCTGATTCTGTAAAAGGTCGGTTCACCATCT CCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAGAGGTGGTAGTCCTATTCTTCCT CTTTTGTTCGACTACTGGGGCCAGGGTACACTGGT CACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTACTG GCTCTTCATCTAATATTGGCAGTAATTATGTCTCCT GGTACCGGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATTATGATAGTAATCGGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGGTTCTTGGGATTC TAGCCTGAATGGTTATGTCTTCGGCGGAGGCACCA AGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSNYDMSWVRQAPGKGLEWVSSIYP NGSSKYYADSVKGRFTISRDNSKNTLYL QMNSLRAEDTAVYYCARGGSPILPLLF DYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCTGSSSNI GSNYVSWYRQLPGTAPKLLIYYDSNRPS GVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGSWDSSLNGYVFGGGTKLTVL
P01-C09	GAGGTGCAGCTGTTGGAGTCTGGGGGAGGCTTGG TACAGCCTGGGGGGTCCCTGAGACTCTCCTGTGCA GCCTCTGGATTCACCTTTAGCAATTATGATATGAGC TGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGT GGGTCTCCTCGATCTCTCCTAGTAGTGGTAGTATAT ATTACGCTGATTCTGTACAAGGTCGGTTCACCATCT CCAGAGACAATTCCAAGAACACGCTGTATCTGCA AATGAACAGCCTGAGAGCCGAGGACACGGCCGTG TATTACTGTGCGAGAGATCCTCATGCTACGAAGAT TCTGCTTTTCGACTACTGGGGCCAGGGTACACTGG TCACCGTGAGCTCA	CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGG GACCCCCGGGCAGAGGGTCACCATCTCTTGTAGTG GCTCTTCATCTAATATTGGCAGTAATACTGTCAACT GGTACCAGCAGCTCCCAGGAACGGCCCCCAAACT CCTCATCTATTATGATAGTAATCGGCCAAGCGGGG TCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACC TCAGCCTCCCTGGCCATCAGTGGGCTCCGGTCCGA GGATGAGGCTGATTATTACTGTGGTTCTTGGGATTC TAGCCTGAATGGTTATGTCTTCGGCGGAGGCACCA AGCTGACGGTCCTA		EVQLLESGGGLVQPGGSLRLSCAASGF TFSNYDMSWVRQAPGKGLEWVSSISP SSGSIYYADSVQGRFTISRDNSKNTLYL QMNSLRAEDTAVYYCARDPHATKILLF DYWGQGTLVTVSS	QSVLTQPPSASGTPGQRVTISCSGSSSNI GSNTVNWYQQLPGTAPKLLIYYDSNRP SGVPDRFSGSKSGTSASLAISGLRSEDEA DYYCGSWDSSLNGYVFGGGTKLTVL