

## Supplementary Information

### Sequences of the expression constructs

#### YFP\_S-RBD:

**DNA sequence of the expression region, which was cloned into the HindIII and XbaI sites of pcDNA 4/TO:**

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AAGCTTAAAGAAGCGGCCCGCCATGGCTCTGACATTTGCTCTGCTGGTGGCTCTGCTGGTGGCTGAGCTGCAAGAGCAGCTGTAG
CGTGGGCGGATCCGTCTCCAAGGGCGAGGAAGTGTTCACCGAGTGGTGCCATTCTGGTGGAAGTGGACGGAGACGTGAATG
GACACAAGTTTACGCGTGGAGCGGAGAGGGCGAAGGGGACGCCACCTACGGAAAGCTGACACTGAAGTTCATTTGCACAACCGGC
AAGCTGCCCCTCCCTTGGCCACCCCTCGTACAACATTCGGATACGGCTCCAGTGTTCGCTAGGTATCCCGACCACATGAA
GCAGCAGACTTTTTCAAGAGCGCCATGCCCGAAGGCTACGTCCAAGAGAGGACAATCTTCTTCAAGGATGACGGCAACTATA
AGACAAGAGCCGAGGTCAAGTTCGAGGGAGACACACTGGTGAATAGAATCGAACTCAAGGGCATCGACTTCAAGGAGGATGGC
AATATTTCTGGGCCACAAGCTGGAGTACAATTACAACAGCCACAACGTGTACATCATGGCCGACAAACAGAAGAACGGCATCAA
GGTGAAGTTCAGATTAGACACAACATCGAGGACGGCTCCGTCGCAACTGGCCGACCCTATCAGCAGAATACCCCTATCCGGC
AGACCCGCAAGATCGCCGACTACAACACTACAAGTGCAGGACACTTACCGGCTGTGTGATCGCTTGGAACAGCAACAATCTC
ATGGTGTGCTGGAGTTCGTGACCGCCCGGCATCACACTGGGCATGGACGAGCTGTACAAGGGCAGCGGCAGGACTACAA
AGACGACGACGACAAAGGCTCTCTCGAGGTGCTGTTCCAAGGCCAGAGTCCAGCCACCGAAAGCATCGTGAGGTTCCCA
ACATCACAACCTCTGCCCTTCGGCGAAGTGTATAATGCCACCAGATTCGCCAGCGTGTACGCTTGGAAATAGAAAGAGGATC
TCCAATGTGTGGCCGACTATAGCGTGTCTACAACAGCGCCAGCTTCAGCACCTTCAAATGCTACGGAGTGTCCCCACCAA
ACTGAACGATCTGTGCTTACCAACGTGTACGCTGACTCCTTCGTGATTAGGGGCGACGAAGTGAGACAATCGTCCCGGAC
AGACCGCAAGATCGCCGACTACAACACTACAAGTGCAGGACACTTACCGGCTGTGTGATCGCTTGGAACAGCAACAATCTC
GACTCCAAGGTTCGGCGCAACTACAATATCTGTATAGACTGTTTAGAAAGTCCAATCTGAAGCCTTTCGAGAGGGACATCAG
CACCGAGATCTATCAAGCCGGCTCCACCCCTTGTAAATGGCGTGGAGGCTTCAACTGCTATTTCCCTCTGCAGAGCTACGGCT
TCCAGCCTACAACGGCGTGGGATACCAGCCCTATAGGTCGTGGTGTGAGCTTTGAGCTGTGATGCTCCCGCCACCGTG
TGCGGCCCCACCATCATCACCACATCACCACTGATAATCTAGA
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**Protein sequence (signal peptide, YFP, HRV3C protease site, S\_RBD):**

```
MALTFALLVALLVLSCKSSCSVGSVSKGEELFTGVVPIILVELDGDVNGHKFSVSGEGGDATYGKLTILKFICTTGKLPVWPW
TLVTTFFYGLQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGIIDFKEDGNILGHKL
EYNYNSHNVYIMADKQKNGIKVNFKIRHNIEDGSVQLADHYQQNTPIGDGPVLLPDNHLYSYQSALS KDPNEKRDMVLLLEFV
TAAGITLGMDELYKSGSDYKDDDDKGSLEVLFQGPRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNRKRI SNCVADY
SVLYNSASFSTFKCYGVSPTKLNDLCFTNRYADS FVIRGDEVQR IAPQGTGKIADYNYKLPDDFTGCVIAWNSNLLDSKVVGN
YNYLYRLFRKSNLKPFERDISTEIQAGSTPCNGVEGFNCYFPLQSYGFQPTNGVGYQPYRVVVLSEFLLHAPATVCGPHHHH
HHHH**
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#### ACE2 peptidase domain:

**DNA sequence of the expression region, which was cloned into the KpnI and NotI sites of pcDNA 4/TO:**

```
GGTACCAGCCACCATGTATAGAAATGCAGCTGCTCAGCTGCATCGCTCTGTCTCTGGCTCTGGTCAACAACAGCAGCACCATTGA
GGAGCAAGCCAAAGACTTTCTGGACAAATTTAACACAGAGGCCGAGGACCTCTTCTATCAAAGCTCTCTGGCCAGCTGGAAGT
ACAATACAAACATTTACCGAGGAGAACTGCGAGAACAATGAACAACCGCGGCGATAAGTGGAGCGCCTTTCTGAAGGAGCAGAGC
ACACTGGCCCAATGTACCCCTCCAAGAGATTCAGAACTGACCGTGAAGCTGCAGCTGCAAGCTCTGCAGCAGAACGGAAAG
CTCCGTGCTCAGCGAGGATAAGAGCAAGAGACTCAACACCATTCTGAACACAATGTCCACCATCTACTCCACCGGAAAGTCT
GCAACCCCGACAATCCCCAAGAGTGTCTGCTGCTGGAGCCCGACTGAACGAGATCATGGCCAACCTCTCTGGACTACAACGAA
AGGCTGTGGGCTTGGGAGAGCTGGAGATCCGAGGTGGGCAAGCAGCTCAGACCTCTGTACGAGGAGTACGTGGTGTGAAGAA
CGAGATGGCTAGAGCTAACACTACGAGGACTATGGCGACTATTGGAGGGGCGATTACGAAGTGAACGGCGTGCACGGATATG
ACTATTTCTAGAGGCCAGCTGATCGAAGACGTCGAGCACACTTCGAAGAGATCAAACCTCTGTACGAGCATCTGCACGCTTAT
GTGAGAGCCAAGCTGATGAACGCCTACCCCTCCTACATTTCCCCCATTTGGCTGTCTGCCCGCCATCTGCTGGGCGATATGTG
GGGAAGATTCTGGACCAATCTGTACTCTCTGACCGTGCCTTTCCGCCAAAAGCCCAACATCGACGTCACCGATGCTATGGTCTG
ATCAAGCATGGGATGCTCAGAGAATCTTCAAGGAGGCCGAGAAGTCTTCTGTCAGCGTGGGACTGCCCAACATGACCCAAAGC
TTCTGGGAGAATAGCATGCTCACAGACCCCGCAACGTGCAGAAGGCTGTGTGCCACCCTACCGCTTGGGATCTGGGCAAGG
CGACTTTAGGATTTGATGTGCACCAAGGTGACAATGGACGATTTTCTGACCGCCACCACGAAATGGGCCACATCCAATACG
CATGGCCTACGCCCTCAGCCCTTTCTGCTGAGAAAACGGAGCCAAACGAGGCTTTTACGAGGCTGTGGGCGAGATCATGTCT
CTGAGCGCCGCTACCCCAAGCATCTGAAGAGCATCGGACTGCTGTCCCGACTTCCAAGAGGATAACGAGACCGAGATCAA
CTTTCTGCTGAAGCAAGCTCTGACCATCGTGGGCACACTGCCCTTACCTACATGCTGGAGAAATGGAGGTGGATGGTGTTC
AGGGCGAGATCCCTAAGGATCAGTGGATGAAGAAGTGGTGGGAGATGAAGAGGGAAATCGTGGGCGTGGTGAACCCGTCCT
CACGACGAGACCTACTGCGATCCCGCCAGCCTCTTCCACGTGAGCAACGATTACTCCTTCAATAGATACTACACAAGAACACT
GTACCAGTTCCAATTTCAAGAGGCTCTGTGCCAAGCCGCCAAACATGAGGGACCTCTGCACAAGTGCACATCAGCAACAGCA
CCGAAGCTGGCCAGAAGCTGTTCAACATGCTGAGGCTGGGAAAGAGCGAGCCTTGGACTGGCTCTGGAAAACGTGCTGGGC
GCCAAGAATGAACGTGAGGCTCTGCTGAACTACTTTGAACCTCTGTTTACATGGCTCAAGGACCAGAACAAGAACCTCCTT
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CGTGGGATGGTCCACCGATTGGAGCCCTACGCCGATCTGGAAGTGTCTTCCAAGGCCCTCACCATCATCACCACCATCACC  
ATGATGAGCGGCCGC

**Protein sequence:**

MYRMQLLSCIALSLALVTNSSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNAGDKWSAFLKEQSTLAQ  
MYPLQEIQNLTVKLQLQALQONGSSVLSEDKSKRLNTILNTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWA  
WESWRSEVVGKQLRPLYEEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGLIEDVEHTFEEIKPLYEHLHAYVRAK  
LMNAYPSYISPIGCLPAHLLGDMWGREFTNLYSLTVFPGQKPNIDVTDAMVDQAWDAQRI FKEAEKFFVSVGLPNMTQGFWEN  
SMLTDPGNVQKAVCHPTAWDLGKGDFRILMCTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAA  
TPKHLKSIGLLSPDFQEDNETEINFLKQALTI VGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWEMKREIVGVVEPVPHDET  
YCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPHKCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNM  
NVRPLLNYFEPLFTWLKDQNKNSFVGWSTDWSPYADLEVLFGQPHHHHHHHH\*\*