SUPPLEMENTAL MATERIAL

Supplemental Table 1: RT-qPCR and RT-PCR primers

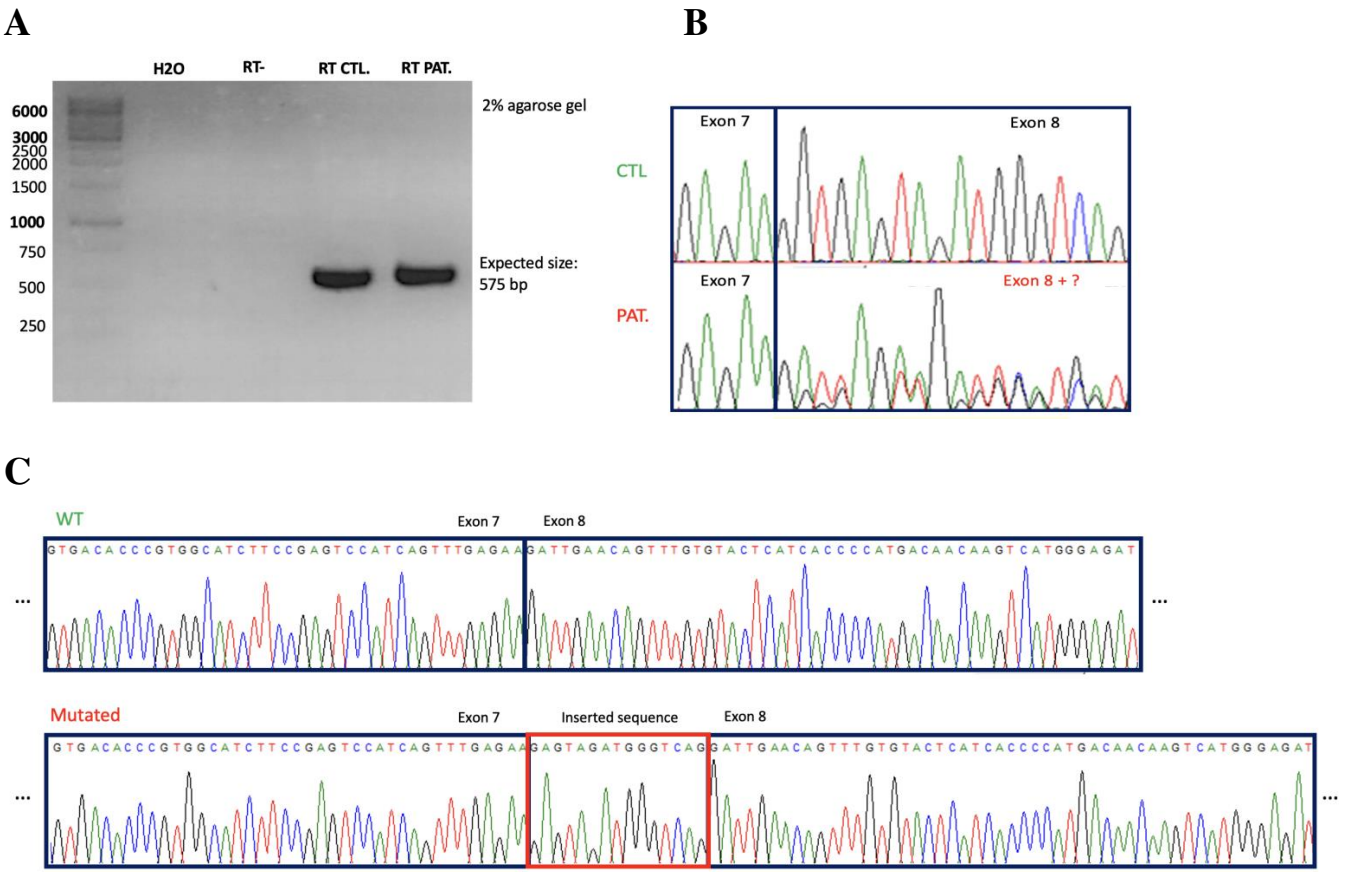
IL-6 (RT-qPCR)	Forward: AGTCCTGATCCAGTTCCTGC Reverse: CTACATTTGCCGAAGAGCCC
p16 (RT-qPCR)	Forward: CTGAGGAGCTGGGCCATC Reverse: GCAGTTGTGGCCCTGTAG
p21 (RT-qPCR)	Forward: CTGGAGACTCTCAGGGTCGAA Reverse: CCAGGACTGCAGGCTTCCT
p53 (RT-qPCR)	Forward: AAGAAACCACTGGATGGAGAA Reverse: CAGCTCTCGGAACATCTCGSS
LMNB1 (RT-qPCR)	Forward: AAGCAGCTGGAGTGGTTGTT Reverse:TTGGATGCTCTTGGGGTTC
SARS1 (RT-qPCR)	Forward: CCACTACCCGTACCATCTGC Reverse: CTGCCCTCATGTTGCTTCTT
SARS2 (RT-qPCR)	Forward: CCTTCTCATCGCGCTCCT Reverse: TGTGGGTGGGTTCTTAGCTT
H36B4 (RT-qPCR)	Forward: ACGGGTACAAACGAGTCCTG Reverse: GCCTTGACCTTTTCAGCAAG

SARS1 (RT-PCR)	Forward: GGAACAGGCTCTCATCCAGTA Reverse: AGGAGACCAACTCACGGAAG

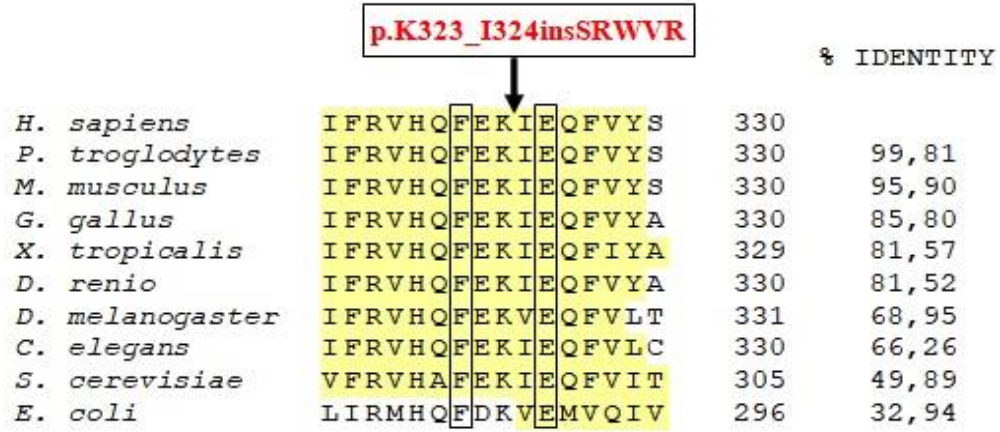
Supplemental Table 2: Yeast strains used in this study.

Name	Genotype	Source
Y23962	MATa/MATα; ura3Δ0/ura3Δ0; leu2Δ0/leu2Δ0; his3Δ1/his3Δ1; met15Δ0/MET15; LYS2/lys2Δ0; YDR023w/YDR023w::kanMX4	EUROSARF
hSARS shuffle	MATa; ura3Δ0; leu2Δ0; his3Δ1;YDR023w::kanMX4 + pRS316-hSARS	This study
WT	MATa; ura3Δ0; leu2Δ0; his3Δ1;YDR023w::kanMX4 + pRS316-ySARS + pRS315	This study
hSARS	MATa; ura3Δ0; leu2Δ0; his3Δ1;YDR023w::kanMX4 + pRS316-hSARS + pRS315	This study
hSARS + hSARSm	MATa; ura3Δ0; leu2Δ0; his3Δ1;YDR023w::kanMX4 + pRS316-hSARS + pRS315-hSARSm	This study

Supplemental Figure 1: RT-PCR and cDNA sequencing results from fibroblasts for SARS1-mutated patient and a control. A: Agarose gel electrophoresis image showing RT-CR products. B: Sanger sequencing results of patient and control RT-PCR products. C: Sanger sequencing results of WT/mutated sequences after cloning patient's cDNA PCR products into a pCMV-Tag2 plasmid.



Supplemental Figure 2: Conservation of mutation site in SARS1. p.Lys323_Ile324 insSerArgTrpValArg insertion is located in an evolutionary conserved region of SARS1 protein. Motif 2 (291-329 aa) is colored in yellow, and contains active site residues important for SARS1 aminoacylation (in boxes).



Supplemental Figure 3: Diploid *S cerevisiae* yeast strains used for complementation assays. Tetrad analysis of haploid spores showed that haploid strains containing pRS316-hSARSm (carrying the SARS1 mutation) did not grow.

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