

Table S2. Primers used in this study

	Primer name (Code)	Sequence (5'→3')
Mutants and screening	RecA (Up-F)	CCACTTTCCTAGGATCTTG
	RecA (Up-R)	GTTC AATAAAATACTTAGGATCCTAACTGTTCAACAATTGGC
	RecA (Down-F)	TTTATAATTCTAAATACTACTCGAGGAGCCATCTTTCATTACACC
	RecA (Down-R)	CAGTCTAAATTGGTGTAGC
	COMmg220-F	AGTGGGCCCTTAAAAACAAAATCGTTTCTAATTTAAATTTAAGTTAACTTAATCCATAA GCATATATGTATAAATTAGAAAAAGCAC
	COMmg220-R	AGTCTCGAGTTAATGATGATGATGATGATGACTAAAACTGAAAGG
	COMmpn534h-F	AGTGGGCCCTTAAAAACAAAATCGTTTCTAATTTAAATTTAAGTTAACTTAATCCATAA GCATATATGAAAACATCAGAGAAAC
	COMmpn534h-R	AGTCTCGAGTTAATGATGATGATGATGATGTTGTCCTCCATTATTTTTTTG
	COMmg192-F	AGTGGGCCCTAACAAAAACAAAATAGTGTATGTTAGTGATTGTGTGAAAAAATTG TTTATAATTAAGTTGTATGAAAACAATGAGAAAACAG
	COMmg192-R	AGTCTCGAGCTAATTTTGGTTTCTTCTG
	MG_343-F	GCATGCTAATGGACTTAATC
	MG_343-R	TCAAAACACAGTAAATGGC
	SCRrecA-F	TGAAC TTTGTGATGAACCAC
	SCRrecA-R	AACTGGTCTCTACAAATTG
	SCRmg220-F	TGATGTTATGGCGGTAGTG
	SCRmg220-R	AGGTCCATTAAGATCCCATC
	SCRmpn534h-F	CGATGTGTTTAGTGATTTGTC
	SCRmpn534h-R	CAAGTTGTGTAGTTGCACCA
	SCRmg343-F	GATTTTTGTGACATTTGTGG
	SCRmg343-R	GAAAACAGCTGAGAAAATG
SCRmg427-F	CAATCATAAAGGGACATGTG	
SCRmg428-R	AGTTGAAGATGGCAAAACAG	
Single Cell analysis	mg220(Up-F)	GTGATCCTGATCCAATCCAA
	mg220:Ch (Up-R)	GTGGCAGGGCGGGCGTAAGTTAAAAC TACTGTTGTTAACAC
	mg220:Ch (Down-F)	TCCTCGCCCTTGCTCACCATACTAAAAC TGGAAAGGAATAG
	mg220(Down-R)	GTTGTTTAAAGATGAACTGGG
	mpn534h (Up-F)	ATCGCACAAACACTTGCACC
	mpn534h:Ch (Up-R)	TCCTCGCCCTTGCTCACCATTTGTCCTCCATTATTTTTTTG
	mpn534h:Ch (Down-F)	GTGGCAGGGCGGGCGTAAAAATGATTACATCTATCTTTGG
	mpn534h (Down-R)	CTTGGAAATTAATCCTTGCC
	orf192.1 (Up-F)	GGTTGTTTGAATTTGATACC
	orf192.1:Ch (Up-R)	CTCGCCCTTGCTCACCATATTTTTAAAATAACGGCGTT
	orf192.1:Ch (Down-F)	GTGGCAGGGCGGGCGTAACTATGTATTCTACTTTAAGAC
	orf192.1 (Down-R)	CTCCTAATTTATCTGTTTCG
	mg428(Up-F)	GGTGGTATTTCACTTGATTG
	mg427:Ch (Up-R)	TCCTCGCCCTTGCTCACCATGTGGACTAAAGTAACGCTAA
	mg427:Ch (Down-F)	GTGGCAGGGCGGGCGTAAAACTTATTA AAAAGCGAAAAATACCTG
	mg427 (Down-R)	TTTCTCAATAGGTAGCAATG
	COMmg428-F P438	AGTGGGCCCTAGTATTTAGAATTAATAAAGTATGAAAAATAATATTAGTGATGTAAAGTTG GG
	mg428:Ch (Up-R)	TCCTCGCCCTTGCTCACCATATATCCATATCTTTCTGTTAGC
	YFP-R	AGTCTCGAGTTACTTGTACAGCTCGTCC
	Cherry-F	ATGGTGAGCAAGGGCGAGGA
Cherry-R	CTACTTGTACAGCTCGTCCA	
Cherry:cat-F	TGGACGAGCTGTACAAGTAGAATTGTAGTATTTAGAATTAATAAAG	
cat-R	TTACGCCCGCCCTGCCAC	
Primer Extension	PEmg285	[6 - FAM] TAGTAAGGTGAATTTGAGCC
	PEmg412	[6 - FAM] CTGATTCCAGCATTTGA
	PEncRNA-1	[6 - FAM] AGGGAAGTTTCAGTGTCC
	PEncRNA-2	[6 - FAM] CTTCCTTTTGAGATCTTGTTT
	PEncRNA-3/4	[6 - FAM] GCCTATGGGTTAACAAAGAGATG
Sanger sequencing	TetUp	TTCTTGCATCAACATGAG
	TetDown	GTCGTCCAAATAGTCCGA
	CmUp	CAACGGTGGTATATCCAG
	CmDown	CAGTACTGCGATGAGTGGCA
	PacUp	GTAGCTAATCTAACAGTAGG
	PacDown	GTCCTAGAACTTGGTGTATG
Transconjugant screening	SCRmg428-F	CACTGATAATCGAATAGCTG
	SCRmg428-R	AGTTGAAGATGGCAAAACAG
	mg281-F	CTAGAGTTTAAAGTTTAAACCCC
	mg281-R	CGATTCCGATTAFACTCGCTCC
	SCRpac-F	CTGGAGAGAACCAGGATCA
SCRpac-R	CATATCCACTCTCTAAATTG	