

<i>A.nidulans AtfA</i> 485 aa	1	-----MSAAVASAVSTTLPSNP-TAHSSPMDAKKNSVKMDN-EASSETKE	43
<i>A.oryzae BAD93190</i> 366 aa	1	-----	1
<i>C.purpurea CAD21519</i> 550 aa	1	-----MGTSPPTNESKSPDLSSNKTRQDPTPGTKVDSVVKPN-----	36
<i>S.pombe BAA12194</i> 566 aa	1	MSPSPVNTSTEPASVAAVSNGNATASSTQVPENNQSDSFAPPSNNSQQNQ	50
<i>A.nidulans AtfA</i> 485 aa	44	<u>QKT</u> DGEPQTSLAPPSRPNPSAATDTP-DYFN-SVHNPFALEPNPFQSF	91
<i>A.oryzae BAD93190</i> 366 aa	1	-----	1
<i>C.purpurea CAD21519</i> 550 aa	37	GASNAEPTKPLAPPPRPHQPPQGNNTSDYFAGQVAGSLSLEPNPFQSF	86
<i>S.pombe BAA12194</i> 566 aa	51	QSSTIAPNGGAGSVANANPADQSDGVTPSFVGLK--LDYEPNPFHESFG	98
<i>A.nidulans AtfA</i> 485 aa	91	-----GGG-GETPGKSI LPPVASITSPALPG---	116
<i>A.oryzae BAD93190</i> 366 aa	1	-----	1
<i>C.purpurea CAD21519</i> 550 aa	86	-----GGGGPETPGGKTLPSVASLTSPSSLL---	112
<i>S.pombe BAA12194</i> 566 aa	99	STASVGGQGNPSLNRNPSLSNIPSGVPPAFARTLLPVPSSIASPDILSGAP	148
<i>A.nidulans AtfA</i> 485 aa	116	-----TSSAGGAYNWSN-SLRSGPLSPAMLAGFAGGSDYFDS-	152
<i>A.oryzae BAD93190</i> 366 aa	1	-----MLAGFTGSSDYFDS-	14
<i>C.purpurea CAD21519</i> 550 aa	112	-----PGGNSTPFNWGGGSLRTGPLSPAMLSGFAN--DYFSDS	148
<i>S.pombe BAA12194</i> 566 aa	149	GIASPLGYPAWSAFTRGTMHNPLSPAITYDRLRPDYLNNE SDASAAARFS	198
<i>A.nidulans AtfA</i> 485 aa	152	--IGRGFPTPNESSLR RTGLTPGGGGSMFPAPSFNSQA LLNQLQNGGATPS	200
<i>A.oryzae BAD93190</i> 366 aa	14	--IGRGFPTPNESSLR RTGLTPGGGGSMFPAPSFNSQA LQQLQSGGATPS	62
<i>C.purpurea CAD21519</i> 550 aa	149	HHLRGGFPTPNESSLR SGLTPGGGGSMFPAPPTPSQA LFSQLASGGATPS	198
<i>S.pombe BAA12194</i> 566 aa	198	--SGTGFTPGVNEPFR SLLTPTGAC--FPAPSPGTAN LLGFHTFDSQFPD	244
<i>A.nidulans AtfA</i> 485 aa	201	TIEFHRTALN-----VKKNGIA-PTSNP-----T	223
<i>A.oryzae BAD93190</i> 366 aa	63	TIEFHRTALNA-----AKKNALNGPTSNP-----T	87
<i>C.purpurea CAD21519</i> 550 aa	199	AIDFHRTA INAAAAKREQGMPPRQSQHQQPTQSQQLQHSQQQSHQQHQH	248
<i>S.pombe BAA12194</i> 566 aa	245	QYR ETPRDGK P-----PVVNGTNGDQSDYFGANA AVHGLCLLSQV	284
<i>A.nidulans AtfA</i> 485 aa	224	GEGDQV PNITTT -----MDIKPAQP-ATVDFGPHDAA DAANGLF MFL	264
<i>A.oryzae BAD93190</i> 366 aa	88	SDPEQASONTN-----MDMKPNQP---DPFGHDAADAANGLF MFL	124
<i>C.purpurea CAD21519</i> 550 aa	249	QHQQGGAQSATSAPPDITNGVPAVKLEQKQPSGPFDPHDN- DAANGLF MFL	297
<i>S.pombe BAA12194</i> 566 aa	285	PDQQK LQQP ISSSEND-----QAASTANLLKQTQQQTFPDSIRPSETQ	329
<i>A.nidulans AtfA</i> 485 aa	265	AKGGQSTANQFAAVSNQ TAIP PQTLQ TSEILQDQNAARRQSVNVNG -VAN	313
<i>A.oryzae BAD93190</i> 366 aa	125	AKGGQANPNQFA-VSNQ SSIP QNIQ ND--QARDSRRTS ---NG---	164
<i>C.purpurea CAD21519</i> 550 aa	298	AQGAQNRNGAQAPSHYNTSAPSHAHAPISSSQNP NPSPQMSSGKAVSR	347
<i>S.pombe BAA12194</i> 566 aa	330	NTNPQAVTGTMN PQASRTQQQ PMYFMGSQQFNGMPSVYGDTVNPADPSLT	379
<i>A.nidulans AtfA</i> 485 aa	314	TREPSGDGSE-QSEQAKP-ARGRGKRNTS TKASSTGN-RRKTD DS-TQGS	359
<i>A.oryzae BAD93190</i> 366 aa	165	GRETSGDVSDVQGEQAKPATK GK-KKNTATK TSGAANNRRKAD DAPVK GS	213
<i>C.purpurea CAD21519</i> 550 aa	348	GVSEATNGSG-DSEQAKPLPKGK GKTAAS ----ATNGRRK AEDMPTK AP	392
<i>S.pombe BAA12194</i> 566 aa	380	LRQTDFSGQNAENG STNLP QKTSNSDMP TANSMPVK LENGT DYSTS QEP	429
<i>A.nidulans AtfA</i> 485 aa	360	NKRTKLNGAASTE SPSE-GESEEEEQ QPAQKKAGDTK KTMTDEEKRK NF	408
<i>A.oryzae BAD93190</i> 366 aa	214	NKKAK--LSSGTEPPSDAGDSE EEEEEQ--KKKSQ SDSK MTDEEKRK NF	259
<i>C.purpurea CAD21519</i> 550 aa	393	PTKKA KGMPE TMNGSVNEEDS DDDDDDM--MGEDGN PKVK MTDEEKRK NF	440
<i>S.pombe BAA12194</i> 566 aa	430	SSNANNQSSPTSSINGKASSE SANGTSYS-KGSSRR NSKNE TDEEKRK SF	478
bZIP			
<i>A.nidulans AtfA</i> 485 aa	409	LERNRVAAL KCRQ KKQWLANLQAKV LFTSEN DALTTT VTQLRE IVNL	458
<i>A.oryzae BAD93190</i> 366 aa	260	LERNRVAAL KCRQ KKQWLANLQAKV LFTSEN DALTT VTQLRE IVNL	309
<i>C.purpurea CAD21519</i> 550 aa	441	LERNRVAAL KCRQ KKQWLANLQNKV EMYSSEN DALTAQIT QLRE IVNL	490
<i>S.pombe BAA12194</i> 566 aa	479	LERNRQAAL KCRQ KKQWLSNLQAKV FYGENE ILSAQ VSALRE IVSL	528
<i>A.nidulans AtfA</i> 485 aa	459	KTLLLAHKDCPV SQAQGL -----IWN-----PNPP	483
<i>A.oryzae BAD93190</i> 366 aa	310	KTLLLAHKDCPV SQAQGL GLPLMMNGMSAGF--DPHPYNI PNMMGM QPGAP	357
<i>C.purpurea CAD21519</i> 550 aa	491	KTLLLAHKDCPV TQQQLH GPYMAQVVEPYNAQ MNPYGM AGPIP-NQQQV	539
<i>S.pombe BAA12194</i> 566 aa	529	KTLLLAHKDCPV AKSNXAAVATS -----VIGSGDLAQ R IX	563
<i>A.nidulans AtfA</i> 485 aa	484	YT----- 485	
<i>A.oryzae BAD93190</i> 366 aa	358	IPTQGLRRQ-- 366	
<i>C.purpurea CAD21519</i> 550 aa	540	MAGQGVQRRFS 550	
<i>S.pombe BAA12194</i> 566 aa	564	LGY----- 566	

Fig. 1S. The *atfA* gene encodes a putative transcription factor of ATF/CREB family.

The amino acid sequence of *Aspergillus nidulans* AtfA is aligned with *Schizosaccharomyces pombe* Atf1, *Claviceps purpurea* Cptf1 and *Aspergillus oryzae* AtfB. Sequences are identified by species name, GenBank accession number and protein size. Underlined sequence indicates the amino acids deleted in the Δ *atfA* mutant. The top red bar indicates the DNA binding domain as deduced from Expasy-Prosit database (<http://www.expasy.org/prosit/>).

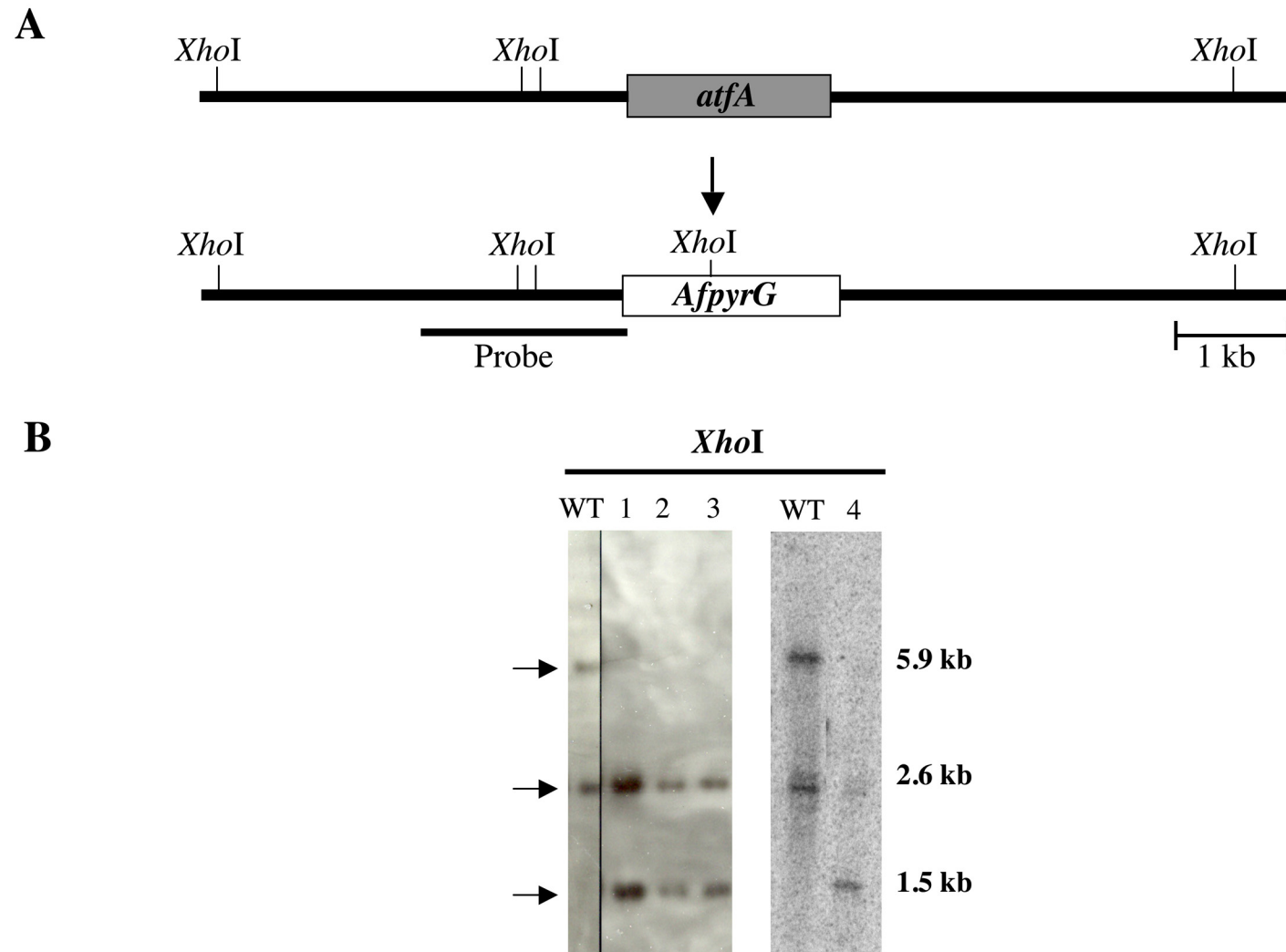


Fig. 2S. **Deletion of the *atfA* gene.** **(A)** The *atfA* deletion construct containing the *AfpyrG* gene as selective marker was generated by double-joint PCR and used to transform strains CFL3 and 11035. Double recombination results in the replacement of wild type *atfA* by the deletion construct. **(B)** DNA from WT and *PyrG*⁺ transformants from CFL3 (1-3) and 11035 (4) strains was digested with *XhoI* and used for Southern blot analysis with the probe indicated in (A). The wild type *XhoI* pattern correspond to bands of 5.9 and 2.6 kb while Δ *atfA* pattern corresponds to bands of 2.6 and 1.5 kb.

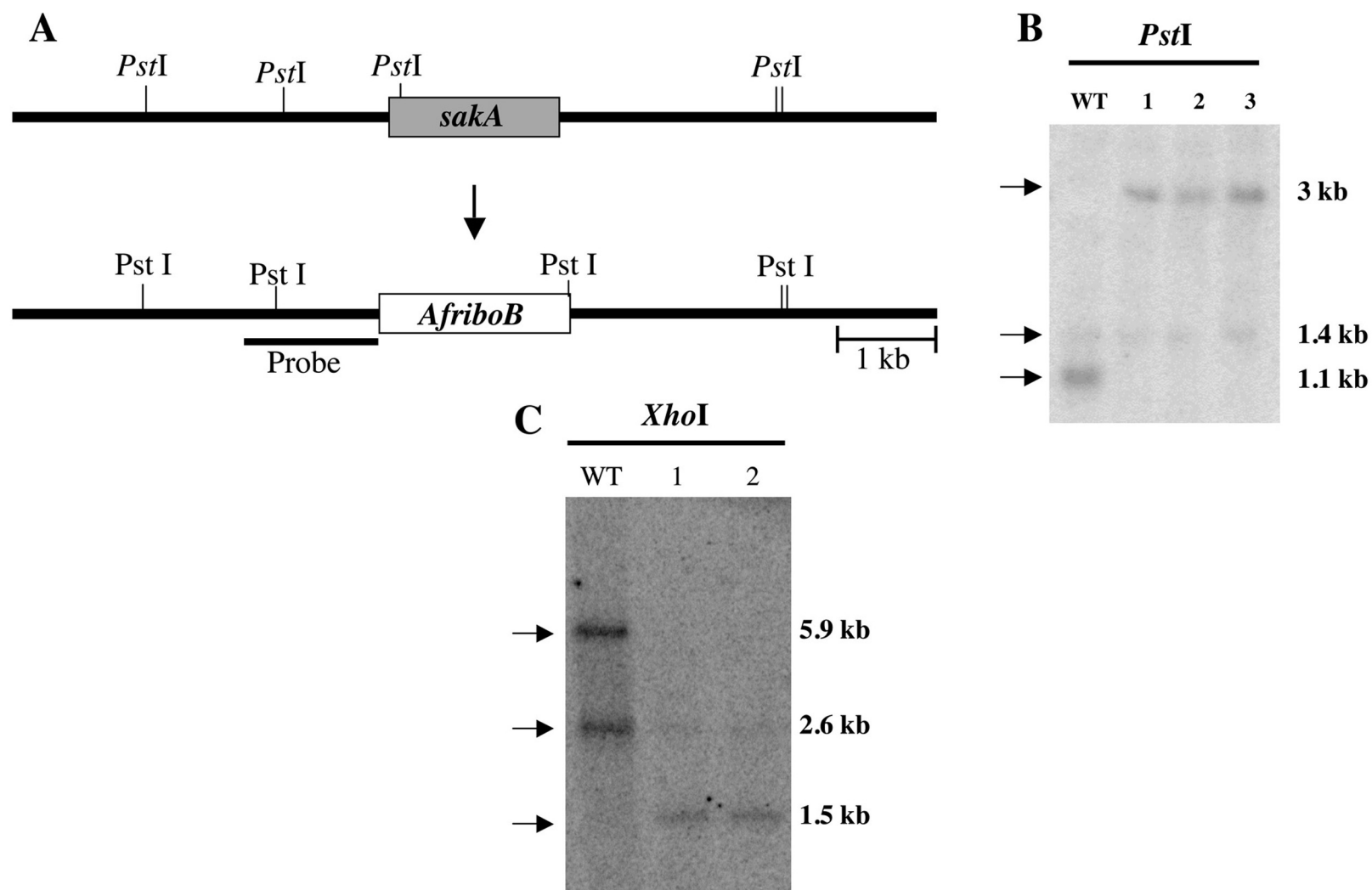


Fig. 3S. **Deletion of the *sakA* gene.** (A) A *sakA* deletion construct containing the *AfriboB* gene as selective marker was used to transform strain 11035. (B) To verify *sakA* deletion DNA of WT and RiboB⁺ transformants (1-3) was digested with *Pst*I and used for Southern blot analysis with the indicated probe (A). Wild type *Pst*I pattern correspond to bands of 1.4 and 1.1 kb; Δ *sakA* pattern corresponds to bands of 1.4 and 1.1 kb. (C) Δ *sakA* Δ *atfA* double mutants were generated by transformation of Δ *sakA* strain TFL Δ *sakA*-03 with the *atfA*-*Afp**yrG* construct. *atfA* deletion was confirmed in PyrG⁺ transformants 1 and 2, by Southern blot analysis as in Fig. 2S.

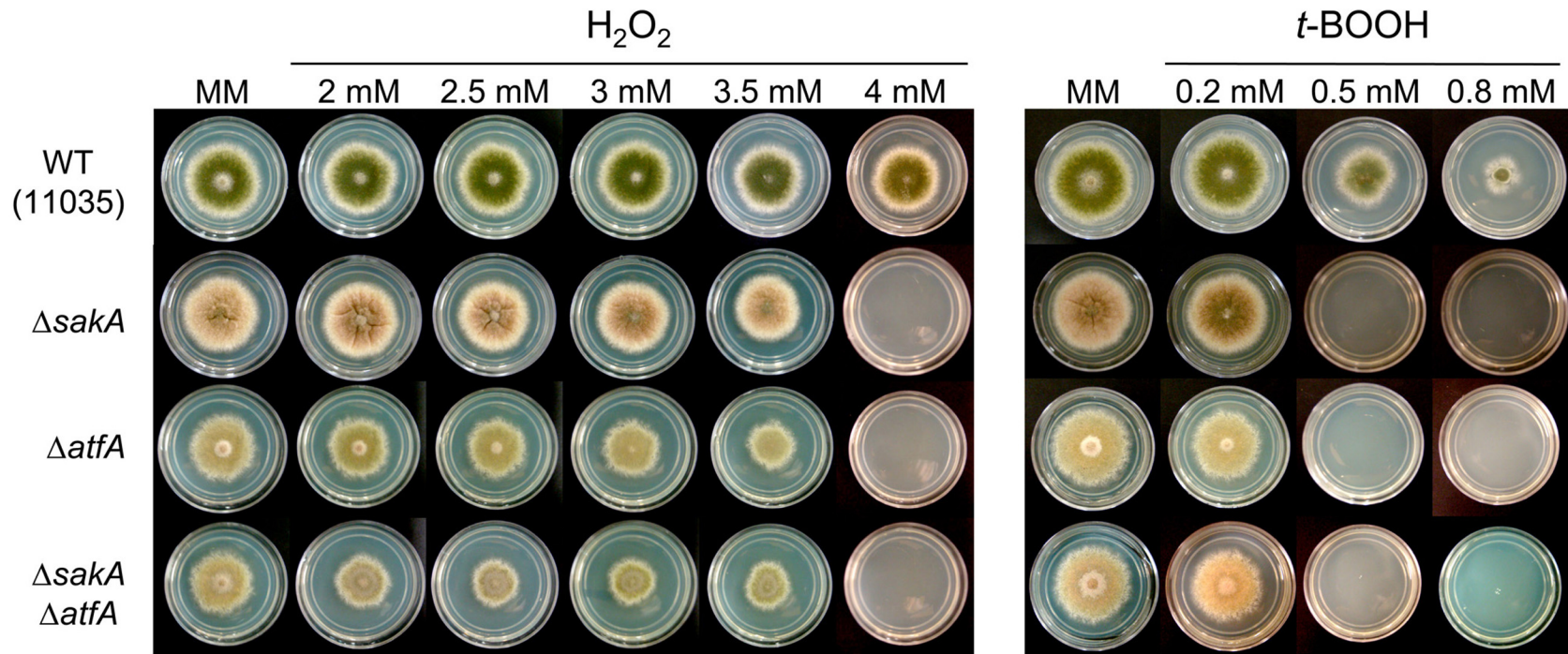


FIG. 4S. **Spores from single and double $\Delta sakA$ and $\Delta atfA$ mutants are equally sensitive to H_2O_2 and *t*-BOOH.** Conidia (10^4) from strains 11035 (WT), TFL $\Delta sakA$ -03 ($\Delta sakA$), TFL $\Delta atfA$ -04 ($\Delta atfA$) and TFL4 ($\Delta sakA \Delta atfA$) were inoculated on plates containing de indicated concentrations of H_2O_2 or *tert*-butyl hydroperoxide (*t*-BOOH) and incubated for 4 days at 37 °C.

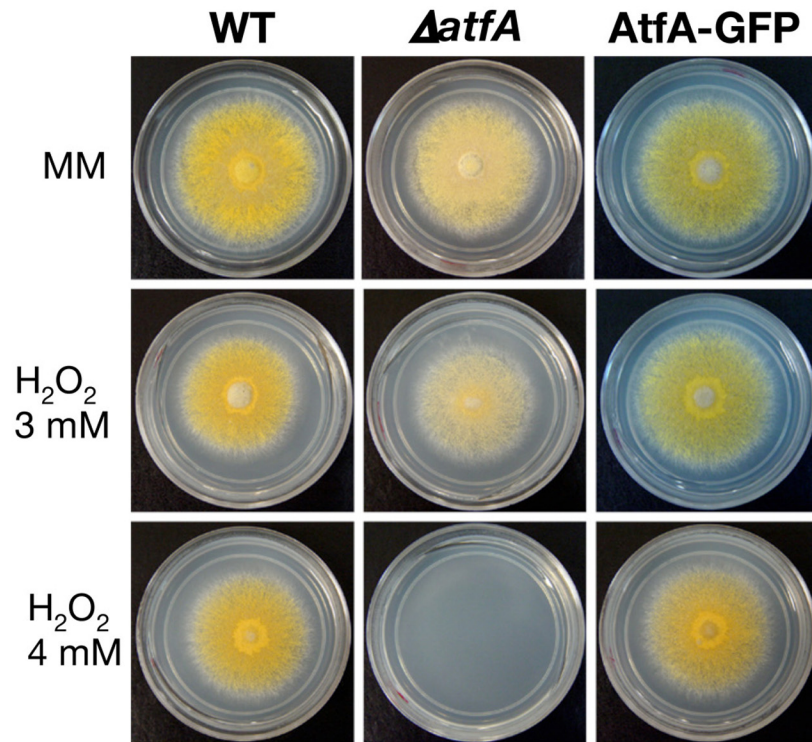
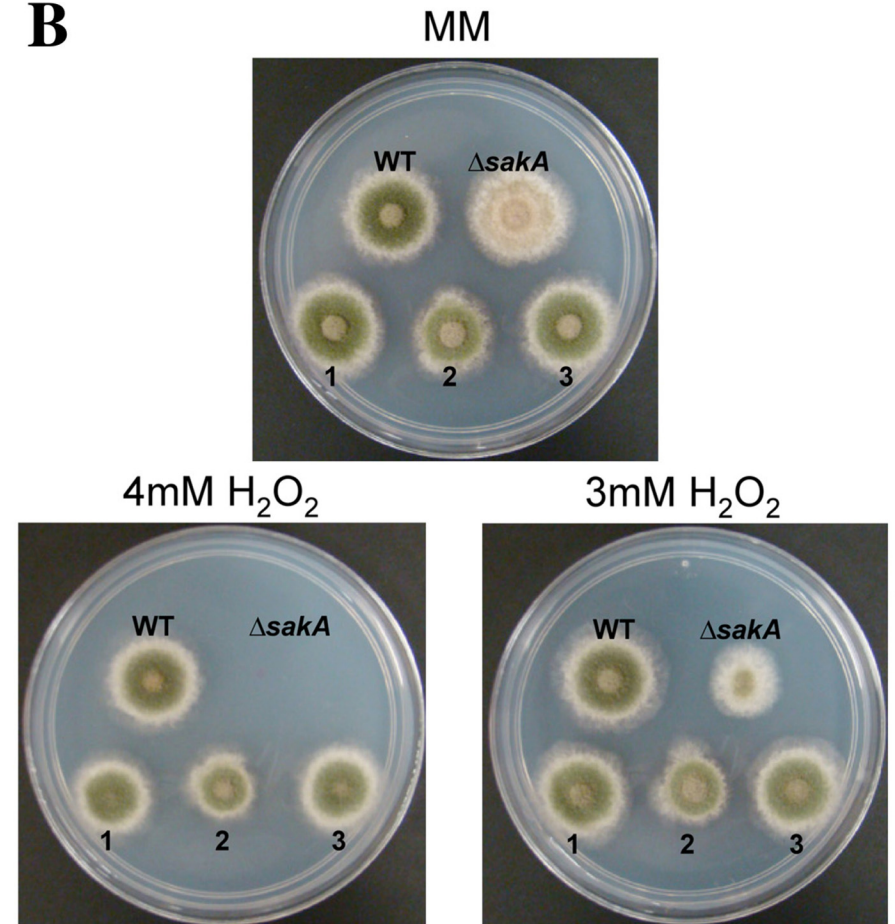
A**B**

Fig. 5S. **GFP tagging does not interfere with *atfA* or *saka* function.** (A) Conidiospores (10^4) from strains CLK43 (WT), CFL $\Delta atfA$ -02 ($\Delta atfA$) and TFL3 (*atfA*-GFP) were inoculated on plates containing 3 or 4 mM H₂O₂ and incubated at 37° C for 4 days. (B) Conidiospores from strains A1155 (WT), TFL $\Delta saka$ -03 ($\Delta saka$) and three *saka*-GFP transformants were point inoculated on plates containing 3 or 4 mM H₂O₂ and incubated at 37° C for 3 days. Transformant 3 was named TFL6 and selected for further experiments.

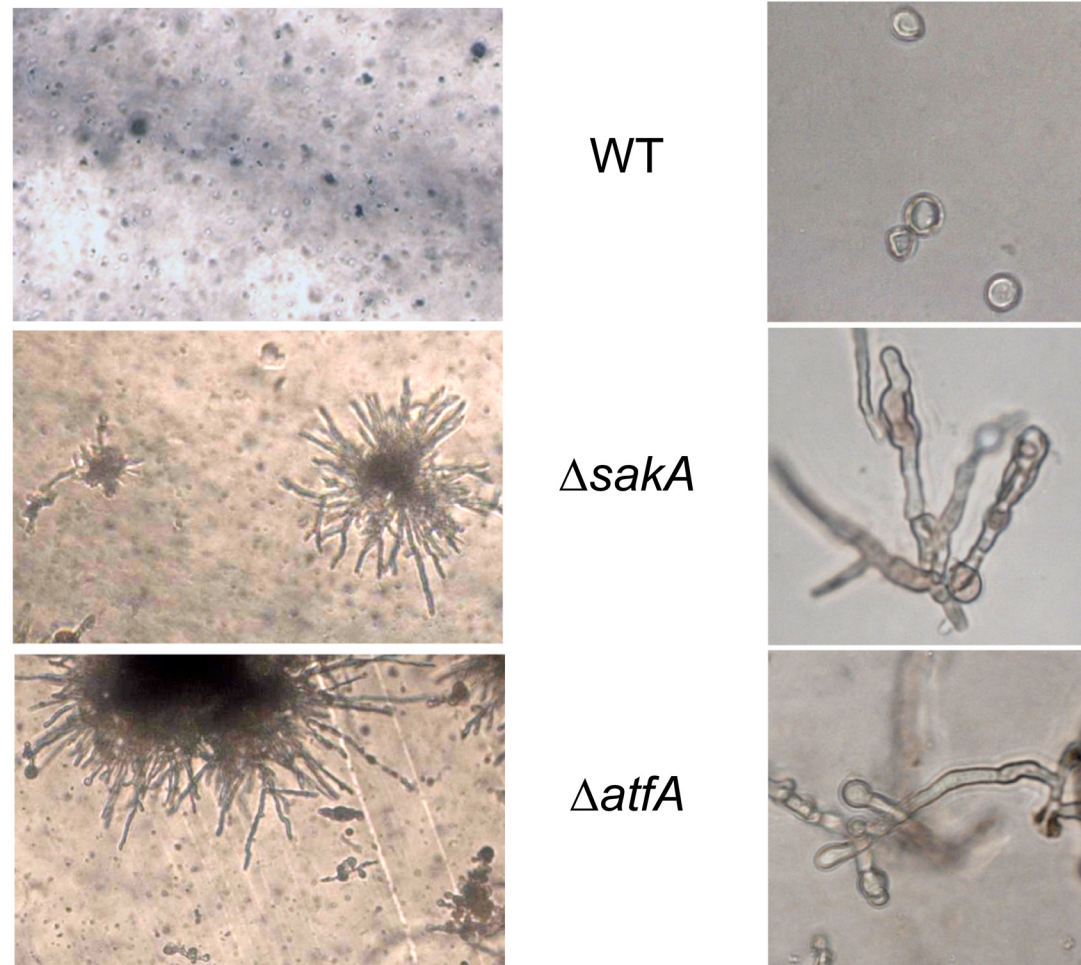


Fig. 6S. **Germination of WT, $\Delta sakA$ and $\Delta atfA$ conidia in the presence of fludioxonil on solid medium.** Conidia from indicated strains were streaked on plates containing minimal solid medium plus 2 $\mu\text{g/ml}$ of fludioxonil and incubated at 37 °C for 4 days. Pictures were taken under the microscope directly from inverted plates (left, 10X objective) or from samples scraped and transferred to a glass slide (right, 40X objective).

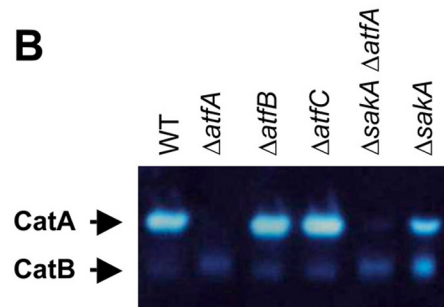
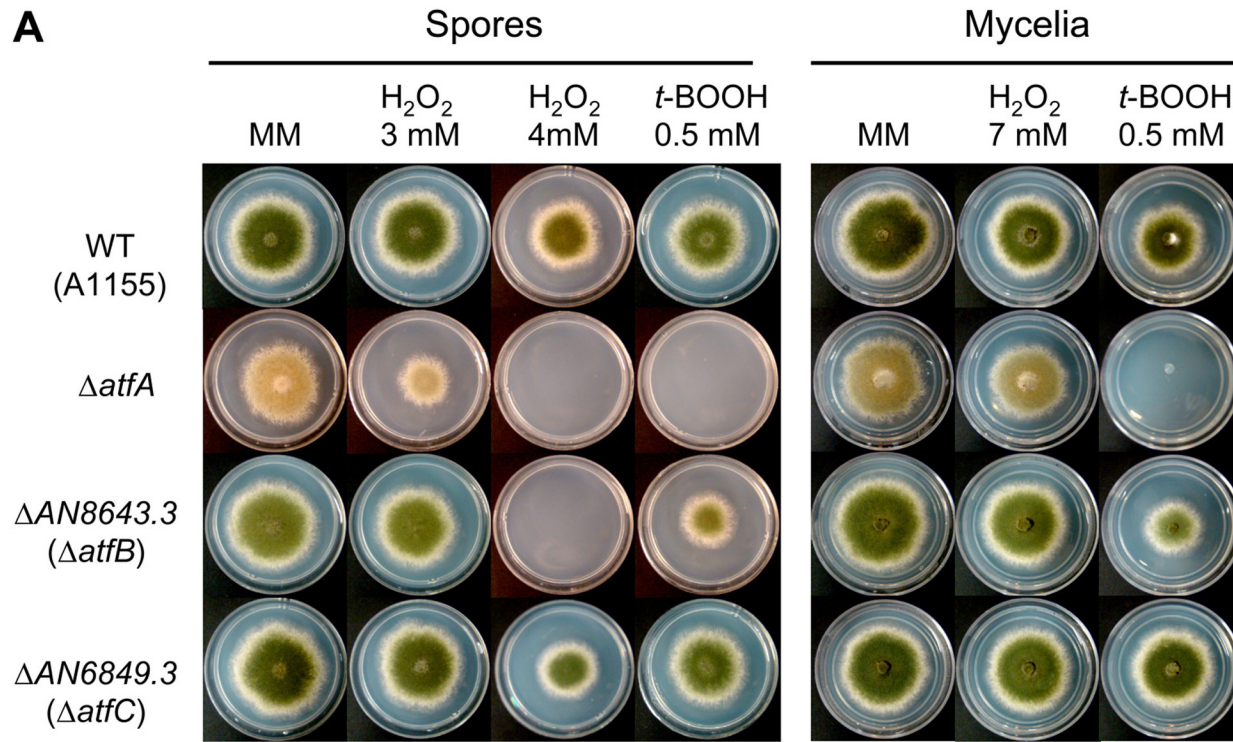


Fig 7S. **Oxidative stress sensitivity and spore catalase activity in mutants lacking putative transcription factors AtfA, AtfB and AtfC.** (A) Genes *AN8643.3* (*atfB*) and *AN6849.3* (*atfC*) were deleted in strain A1155, confirmed by Southern blot analysis and tested as in Fig. 1. (B) 30 μ g of protein extract prepared from spores of the indicated strains were processed as in Fig. 2, to determine catalase activity.