

# A.

CaSch9 1 MVDFAKSLFGFGNYKKESSLQSPTPPPSAHSSQEQHHSNTTEYPQSHLS  
ScSch9 1 MMNF-----FTSKSSNQD-----TGFSSQHQH--PNGQNGNNNS

CaSch9 51 QQQSHRYQPPHMEQSHQFPQQQQQQQSGTNKFFPKTLVSAAPTAVA  
ScSch9 35 TAGNDNGYPCKLVS SG----PCASSNNGALFTN----FTLQTATPTAIS

CaSch9 101 NHSSVYGTTSTTTNNYPEAYLNQTFKNNIYNPQQQQQQAQQPPPEQQS  
ScSch9 77 QDLYAMGTTGITSEN--ALFQMKSMNGLSSVNNNSNTPTIITTSQEEET

CaSch9 151 SAPYQNSANIQQPYGNQWGSS--QDQDANIITIDKTGNKLSPASR-----  
ScSch9 125 -----NAGNV---HGDTGCGNSLQNSEDDNFSSSSTTKCLLSSTSSLSINQ

CaSch9 194 -----DSPIKGKCLKVTILEAKDIFA----TOPYVVC SFESSEFV  
ScSch9 167 REAAAAAYGPDIDIPRGKLEVTIIEARDLVTRSKDSQPYVVCIFESSEFI

CaSch9 229 TNAPDSYGKSPVSSFGHNNNQGHNGPRNMYNSNHGSPKALPMKNSGN--  
ScSch9 217 SNGPESLGA INNNNNNNNNNQ--HNQNH INNNNENTNPD AASQHHNNNSG

CaSch9 277 -----LFGQRPSMYQRQL-----STPH  
ScSch9 266 WNGSQLPSIKEHLKKKPLYTHRSSQLDQLNSC SSVTDPSKRSSNS SSGS

CaSch9 294 LNL P-NDSSNPIWNHDTIFDVVGSKSELDISVYD GARDDAFLGHVRI SPS  
ScSch9 316 SNGPKNDSSHP IWHHKTIIFDVLGSHSELDISVYDAAHDMFLGQVRLYPM

CaSch9 343 TDK--NNKNESEWLQLGARITGETVSSGHIKIKWEYTSFDNNIKRSYGPDD  
ScSch9 366 IHNLAHASQHQWHS LKPRVIDEVV--SGDILIKWTY---KQTKKRHYGPQD

CaSch9 392 FHFRLRLGKGTFGQVFQVRKKDTNRVYAMKILSKKVI VKKKEIAHTIGER  
ScSch9 412 FEVRLRLGKGTFGQVYQVKKKDTQRIIYAMKVL SKKVI VKKNEIAHTIGER

CaSch9 442 NILVRTSAASSPFIVGLKFSFQTPSDLFLVTD FMSGGELF FHLQKEGRFN  
ScSch9 462 NILVTTASKSSPFIVGLKFSFQTPIDLVLVTDYMSGGELFWHLQKEGRFS

CaSch9 492 EDRSKFYTAELI LLALEHLHDNDIVYRDLKPENILLDANGHIALCDFGLSK  
ScSch9 512 EDRAKFYIAELVL ALEHLHDNDIVYRDLKPENILLDANGNIALCDFGLSK

CaSch9 542 ADLNMDGTNTFCGTTEYLAP ELLDEQGYTKMVD FWSLGVLI FEMFCGW  
ScSch9 562 ADLK--DRINTFCGTTEYLAP ELLDEIGYTKMVD FWSLGVLI FEMCCGW

CaSch9 592 SPFHAENTQOMYKNIAFGKVRFPKDVLSPEGRSFVKGLLNRNPKHRLGAT  
610 SPFFAENNQKMYQKIAFGKVKFPRDVLSQEGRSFVKGLLNRNPKHRLGAI

CaSch9 642 DDARELKAHPFFADIDWDLIRAKNI PPPFKPHIVSETDISNFD EFTSEN  
ScSch9 660 DDGRELRAHPFFADIDWEALKQKKI PPPFKPHLVSETDISNFDPEFTTAS

CaSch9 692 TSAL-KRQMEIATTPLSPIQANFKGFTYVDDSTMD DHFA--RSYRANA-  
ScSch9 710 TSYMKNKHQPMMTATPLSPAMQAKFAGFTFVDESAIDEHVNMRKFLQNSY

CaSch9 738 FRPPGSFIPGDPNLPPDEEVLAEQIEEE-----DEMEVDE  
ScSch9 760 FMEPGSFIPGNPNLPPDEDVIDDDGDEDINDGFNOEKNMNNSHSQMDFDG

CaSch9 773 DQHMDDEFVNGRFDL  
ScSch9 810 DQHMDDEFVSGRFEI

## B.

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CaRim15 1 MSNTPNKSTPEPESTVFGHSIFEHPLHHSVSERSISPRHVSKEQSNHNNH
ScRim15 1 MFNRSNTA-----
                                         *****
CaRim15 51 NHQQQQQASNSLNFSDQVSGYDYPSATIEEQID--LRLASSNPTIVMEL
ScRim15 9 GGSQAMKEGLGINKLSPISNSNSPSSLTSSNYEKYLQLATEKNPCMILEL

*****
CaRim15 99 DLDGNIRYLSKNWEYIVGT-NIKKIVNRHTSKIIIGNDDDSQVFNIAID
ScRim15 59 ELDGKVRYSQPWNITITGVADDSGSSPTYIADLILG-SDQDKGVFQKATD

CaRim15 148 AMT-REDISYKVKFITATNHTQRNKDGEEVYNDLNDLLLSRSHDDEQSGI
ScRim15 108 MLLMNDTISCTITF-----

CaRim15 197 LTPHNSMEDMAKNDNIPVNNYFEKQQQQQQQQQQQHLESSQPEPEKI
ScRim15 122 -----KI

CaRim15 247 DTSDTSSTLSSEISNDGEIIELEAQGILIHDAKTKLPTHSMWTIRPFKEI
ScRim15 124 KAADYEG--SAGCDESTITILEARGILIRDGHTQLPSHTMWIVKPRTND

CaRim15 297 -----DLELTLPIALIDLGLFGSEIFEGYLV
ScRim15 172 WSDFYANEDAQDMVIQLSDNCDDIDIQLPEEFAKTLGFGAKLIVQYLKR

CaRim15 324 LKNLGIIDEESVFPQPKMILCRICETNIPAWFIEKHSDLCVLEHRAAEKQL
ScRim15 222 IRLEMIIDEFNLELPKMELCRVCENFVPVWVLETHSQSCVCEHRTESLIQ

CaRim15 374 QYHDAIGEQKELVIRISESLAVSNQSLPLLSSSSGGSCSGLNTPPPQLLT
ScRim15 272 LLHDNLEQQAILANFTKDSEYKGSQIQVRSNNF-----LN----QVLD

CaRim15 424 NQSLCLASSASLVSSASSSSSEGESSSSSSHLILEYKGLPLPNMSDYPSPK
ScRim15 312 SLRELQDAIDINPS-----EMVDPDYH-----SLSTFPQDN

CaRim15 474 LANKILTKNFQSKNKHALMFSKFFPFGILQRIVELCDEALLVNPSTNED
ScRim15 344 -GNNNNNNNNNNNNALL--DQFP-----IQKDTVSLN

CaRim15 524 NILAFSPGSEKALNVMS--SSEFL--ETSDVAIKQLIEDTQELINDKMET
ScRim15 375 SYFQFSPRTNHNINQVTSWQSRFFLNDQDPLGLALLIHDTLDLARKKVDA

CaRim15 570 LSRLVLSILQFSEKIKHEVDTLVLCVRETVEKIKNQTIRESRECTPINND
ScRim15 425 VLRLDNAMTYSLKIKNEVNNYVQLIREQIE-INKHAALTH---PMNLR

CaRim15 620 SSISIN-----EYVPSRLETSNIKDQQQTQIEEPPPPQQQP
ScRim15 470 SSSIFHSPLQIHSQQPEAENLIYSSTPLQVQHDQCASFAPSKSHLEP

CaRim15 657 TQNIQDNYQEQPISETLNLTTT---TTTASTLQAPKPKHSISP--IISDL
ScRim15 520 IPFPVSSIEETPTANDIRHPSPLPRSCSNTVMKLPPIPRRKLDSNGLFSDA

CaRim15 702 LTPGENVITPK-DILLKESKSYNTSMSASPLNRSGLSCLTP-RPQSMVAP
ScRim15 570 YLNADIIPNPSIESTISIDRDNNTNSRGSMSKQYCGIPEATDSRTNSERP

CaRim15 750 VSTNSSSRDLESI---QVLDLSKRSENNSQYSSPERRHLSAPBPYVEK
ScRim15 620 SSSSRLGIRSRISITPRQKIEYSHVDNDDRTEMLSRDKDSLQFPQSVDT

CaRim15 797 SNLTTLOKNTAATPIASPSLTT--MEDINASATTTTTNIGGYGLGDK-
ScRim15 670 TITSSTQATTGKTKNSNNSINSVLPKLMTSISLIPRRGSPSFCNLASHS

CaRim15 844 -----KITH-----LSLNTQVPSQ-PSS-AMSSSVKSATIRPP
ScRim15 720 MQQTNSFKLIHDKSPISSPFTFSKDFLTPEQHPSNIARTDSINNAMLTSP

CaRim15 875 ---LSPLLVSTQQPQPRLSGGIRDYQVIKPIKGAFGSVFLGKRKLTGD
ScRim15 770 NMPLSPLLALINQ-TVKSPTPSKDYDILKPIKGAAGSVYLARKKLTGD

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CaRim15 922 YVAIKCLKKRDMIAKNQVNLNVKSERAVMMRQSDSPYVAQLYSFQSRDYL
ScRim15 819 YFAIKVLRKSDMIAKNQVNLNVKSERAIMMVQSDKPYVARLFAFQNKDNL

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CaRim15 972 YLVMEYLNGGDCANLLKTLGVIGVDWTPRYIAETIIVGVDDLNRGIIHRD
ScRim15 869 FLVMEYLPGGDLATLIKMMGYLPDQWAKQYLTEIVVGVNDMHQNGIIHHD

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CaRim15 1022 LKPDNIDLIDKNHKLKLTDFGLSRLGVVGRQQTQQRKSSSTNEQGIELFRS
ScRim15 919 LKPENLLIDNAGHVKLTDFGLSRAGLIRRHKVFPHKSSLSISSTLPIDNP
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CaRim15	1072	MLSEESNQKVNPG-IGTPFSLSPSLEQSRVSNFNSQQQQQQQQMGVPAG
ScRim15	969	ANNFTMNNNSNHSQLSTPDSFTSDHKQ----YNRSKKSSLGQY-----
CaRim15	1121	NAPSVSSLAAGENFVLSSTSTPLAYLESFNLSVSVSTPTGATQQQQQQQP
ScRim15	1010	-----EHSEYSSTST-----NSHSMTPTPSTNTVVYPS---
CaRim15	1171	PPKPFVKSSNGRSGSSGFDSPIILKPIIPRTESESFAIMD-----DEPSP
ScRim15	1037	----YYRGKDRSHGSSNIDLPL---ASLRRSEQLSFLSLDLSRSSTPPLA
CaRim15	1216	GPTTDYA-----LYNPDNYKNEGATATTATAATAGTGGGGDVNAG--
ScRim15	1080	NPTNSNANNIMRRKSLTENKSFNDLLSSDAIAATNTNINSNNNISLSPA
CaRim15	1256	-----DGGGANIKKFVGTDPDYLAPEIITKSGE-NESSDWFVSVGVM
ScRim15	1130	PSDLALFYPPDSKQN-KKFFGTPDYLAPEITLCKGEDNKQCDWWSVGCIF
CaRim15	1296	FFFLYGYPPFHADTPEKVFNNLLSGKIDWPEL-TPPEEDMKFCPPDAKDLI
ScRim15	1179	FELLLGYPPFHAETPDVAVFKLLSGVIQWPEFKNEEEEREFLTPEAKDLI
CaRim15	1345	NKLLVMNPEERLGFNGADEIKNHPYFKNIHWDTLFEEPAPFTMLDDPES
ScRim15	1229	EKLLVVDPAKRLGAKGIQEIKDHPYFKNVDWDHVYDEEASFVPTIDNPED
CaRim15	1395	TDYFDSRGAMMTQFPKEEDSQSSS-----SSQSSDGETKPEEN
ScRim15	1279	TDYFDLRGAEQLQDFGDDIENDNANILFGKHGINTDVSELSAANLSPPLNH
CaRim15	1433	EN---EKDIVVTNTRSSSTGHIH-----RQKSL-----DRN
ScRim15	1329	KNILSRKLSMSNTNTRSSNNNSNSVHDFGAHTPVNKLSTIASVLESVPQET
CaRim15	1463	SSISSNDSGSLSLPGSSSIN---NITPTTTKKERRSSKLADP-SEFGSF
ScRim15	1379	GYITPNGTGTTTSAKNSPNLKNLSLAIPPHMRDRSSKLNDSQTEFGSF
CaRim15	1508	HFRNLAVLERQNKDVINRLKTEHLEHRGSFSTSSSESTPTGRSRGFSFG
ScRim15	1429	NFRNLSALDKANKDAINRLKSEHFSEQPGVHRRTSSASL-MGSSSDGSVVS
CaRim15	1558	NACNSGSSSSCGGGGGVGTSGSPFKRPISPPSFNANQSSGLGSPVITT
ScRim15	1478	TPGSNASNTTSG-----KLKIHKPTISGSPSTFGTFPKTFL
CaRim15	1608	SSGAMGIINTNPVNIITTTSSNHNHNSFNTVGGGLGIGTATATTAAATTA
ScRim15	1515	RSDFSTRSYSPERSISIDSSTLRKGSI-----IGDNQOTTANSSDS
CaRim15	1658	TTTTGSIRSASPHRLFESPNIKHERIPSATSAVSSGDEIMISPLMIHH
ScRim15	1558	PTMT-----KFKSPLSPAN---TTTVSSYFSRQRVL-----
CaRim15	1708	DDRNHHSRSSSLPYLQTITKQPSFSLNHNHIIRDFSSPNSSD--SEDTT
ScRim15	1586	-----SKSFS-----QRTNSSDLSAEESD
CaRim15	1756	KSNALLRVQRRESSRMSTELLSGTNTGGGGGAGGGTSSNNSSVIVADL
ScRim15	1605	RLQAISRVSRLRNR---SG-----RKSSSTSEIGYHM
CaRim15	1806	DVLYCEPISVIRHSVVKLLEKAGCIVVSVTDGELIKRATSQVKFDLIFT
ScRim15	1636	DVLYCEPIPIHRYRVTKDLENLGCIVVSVGAGDELVSRATSGVDFDLIMT
CaRim15	1856	GLKISKVDAIDAVKLIKFTSGKNRNTPIIGITENKNKIDDDITTSSTFDY
ScRim15	1686	ALKLPKLGALDIVQLLKQTNGANSTPIVAIT----NYFQEAATSRVFD
CaRim15	1906	IIEP--NLEAISKVCR-----ILRS-----
ScRim15	1732	VLEKPVKLDLKKLVAKYALKKSQEDEEHTLLSDSDETH

**Supplemental Figure 1.** Sequence comparisons of *C. albicans* and *S. cerevisiae* Sch9 (A) and Rim15 (B) proteins. Identical residues are marked by black backgrounds, the contiguous kinase homology domain in Sch9 and the interrupted domain in Rim15 are indicated by the top lines. Six Ser/Thr sites phosphorylated in ScSch9 by ScTor1 and the single Ser residue in ScRim15 (S1061) phosphorylated by ScSch9 are indicated by red circles. The PAS core domain in ScRim15 is marked by asterisks.