

Supplemental Figure S1. Alignment of rCpa1 and rCpa2

rCpa1 accession no. KY883768, 586 AA

rCpa2 accession no. WAB54687.1, 586 AA

CLUSTAL O(1.2.4) multiple sequence alignment

rCpa1	MGSSHHHHHHSSGLVPRGSHMGPGPMQFSHALIALVAAGLASAQLPDI PPCALNCFVEA	60
rCpa2	MGSSHHHHHHSSGLVPRGSHMGPGPMQFSHALIALVAAGLASAQLPDI PPCALNCFVEA	60
	*****	
rCpa1	LGNDGCTRLTDFKCHCSKPELPGQI TPCVEEACPLDARISVSNI VVDQCSKAGVPI DIPP	120
rCpa2	LGNDGCTRLTDFKCHCSKPELPGQI TPCVEEACPLDARISVSNI VVDQCSKAGVPI EIPP	120
	*****:	
rCpa1	VDTTAAPEPSETGPGPGMKFSLLSAIAAAVFVPFTSATPLASTADLSYDTHYDDPSLPLS	180
rCpa2	VDTTAAPEPSETGPGPGMKFSLLSAIAAAVFVPFTSATPLASTTDLSDYDTHYDDPSLALS	180
	*****:*****	
rCpa1	GVTCSDGDNGMITKGYNTAGEIPNYPHVGGAFVETWNSPNCGKCYKVTYNAKTI FLTAI	240
rCpa2	GVTCSDGDNGMITKGYNTAGEIPNYPHVGGAFVETWNSPNCGKCYKVTYNAKTI FLTAI	240
	*****	
rCpa1	DHSNSGFNI AKKSMDVLTNGRAEELGRI KVTYEEVASSLCGLKGPGPGMASLKAGDSFPS	300
rCpa2	DHSNSGFNI AKKSMDVLTNGRAEELGRI KVTYEEVASSLCGLKGPGPGMASLKAGDSFPS	300
	*****	
rCpa1	DVVFSYIPWTPDNKDI KACGMPQNYEASKLWADKKVVL FSLPGAFTPTCSASHLPGYIQK	360
rCpa2	DVVFSYIPWTPDNKDI KACGMPQNYEASKLWADKKVVL FSLPGAFTPTCSASHLPGYIQK	360
	*****	
rCpa1	LPQLKEKGV DVVAVLAFNDAWMSAWGKANGVTGDDILFLSDPEAKFSKSI GWNAGERTG	420
rCpa2	LPQLKEKGV DVVAVLAFNDAWMSAWGKANGVTGDDILFLSDPEAKFSKSI GWNAGERTG	420
	*****	
rCpa1	RYAMII DHGQV TYAEI EPGREVT VSGADAVI SKLGPGPGMRNSI LLAATVLLGCTSAKVH	480
rCpa2	RYAII I DHGK VTYAEI EPGREVT VSGADAVF SKLGPGPGMRNSI LLAATVLLGCTSAKVH	480
	***:*****:*****:*****	
rCpa1	GPGPGHVRALGQKYFGSLPSSQQQT VGP GPGPAKVDVLLAQSLKLADV LKFGPGPGNGLA	540
rCpa2	GPGPGHVRALGQKYFGSLPSSQQQT VGP GPGPAKVDVLLAQSLKLADV LKFGPGPGNGLA	540
	*****	
rCpa1	TTGTLVLEWTRLSDITGPGPGT PLVVI IPNYPYTT WSNISTGPGPG	586
rCpa2	TTGTLVLEWTRLSDITGPGPGT PLVVI IPNYPYTT FSNISTGPGPG	586
	*****:*****	

**Supplementary Table S1.** Primer sequences and predicted sizes of PCR amplicons of the *Coccidioides* antigens

Antigen GenBank No.	Primer Sequences*	PCR amplicon size (bp)	Reference
Ag2/Pra (XM_003069107)	Forward: 5' -AATCGTTCTCGTCCGTTAGA-3'  Reverse: 5' -CTCCTCGGTTGGCTCAG-3'	585	Jiang et al, 1999 Peng et al, 1999 Kirkland et al, 1998 Herr et al, 2007
Cs-Ag (XM_003065932)	Forward: 5' -GGGAAAGATGAAGTTCTCACTCCT-3'  Reverse: 5' -GCACATCGCCCAATACGCCTTTA-3'	443	Pan et al, 1995 Shubitz et al, 2006
Pmp1 (XM_003069228)	Forward: 5' -GTCTGCCAACGCTCGATTAC-3'  Reverse: 5' -GGCCGTTTCCCTTGATTCTCC-3'	501	Orsborn et al, 2006
Amn1 (XM_003068811)	Forward: 5' -TGAAACCACCATTCGCTACCT-3'  Reverse: 5' -AGGCCCGTCTCAATGTCAAT-3'	331	Tarcha et al, 2006 Hurtgen et al, 2012
Plb (XM_003065040)	Forward: 5' -CTTTGCCATCGACTCTTCTG-3'  Reverse: 5' -CAAACGACCGACTCAAGATAG-3'	677	Hurtgen et al, 2017
Pep1 (XM_001244245.2)	Forward: 5' -CACACGCTCTTTCAAGACC-3'  Reverse: 5' -CAGAGATTTGAGCTTCCTGTG-3'	537	

\*Gene-specific primers only flank DNA fragments of each antigenic peptides that were incorporated in the chimeric rCpa1 vaccine antigen (GenBank accession AVH85517.1).