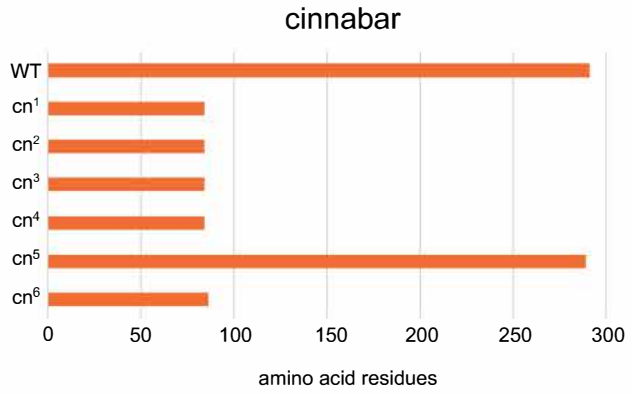
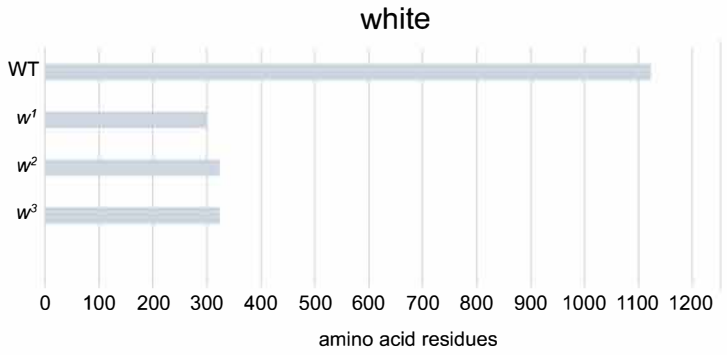
a



c



b

Wild-type *cn* deduced protein (291 residues)

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRL
FRTHFPLGISLIGKEKLVHDYFAAAPSNLVSVKCGPYNVGSSAVLIGDAAHAMVPFYGQGMNAGFEDCQLLDRILTESCW
DLQTALPQFSSFRRPDAHAICDLAMYNYVEMRDLVTRQSFLWRKRLDNALYWMFPSLWVPLYNSVTFSDMRYSHCASNKR
WQDKMVSRGLRVACVFLCLTTVYCSVSWWPSLRQTLHPHFTSVFLFSPLLS*

***cn¹* deduced protein (84 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRLLLP
HPLP*

***cn²* deduced protein (84 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRQLLP
HPLP*

***cn³* deduced protein (84 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRQVIP
HPLP*

***cn⁴* deduced protein (84 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRLQLL
PHPLP*

***cn⁵* deduced protein (289 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPVRNFFH
THFPLGISLIGKEKLVHDYFAASPSNLVSVKCGPYNVGSSAVLIGDAAHAMVPFYGQGMNAGFEDCQLLDRILTESGWDL
QTALPQFSSFRRPDAHAICDLAMYNYVEMRDLVTRQSFLWRKRLDNALYWMFPSLWVPLYNSVTFSDMRYSHCASNKRWQDK
MVSRGLRVACVFLCLTTVYCSVSWWPSLRQTLHPHFTSVFLFSPLLS*

***cn⁶* deduced protein (86 residues)**

MKRPMFDYNQTYIQHGYMELCIPPTQDGQFAMKPNYLHIWPRGSFMMIALPNQDCSWTVTLFMPFSQFSALDSPSSTPTS
LTPSVS*

d

Wild-type *w* protein (1161 aa)

MLIREVANKVIEMPCAQNHRNGSQKELSNGLYLELSDTEKKPQVNGYSSGSGGSGSPYSTVSILPKENITYTWSNVNVFT
RLEHRQNRVVNLVHNVVHRDRPQQRKHILKNVTGVAYPGELMALMGSSGAGKTTLLNSLTFRAPKTLAVTGHRAINGVPV
DANALAALSAYVQQDDLFIGTLTVREHLIFQALVRMDRHIPYVQRMIRVEEVINDLMLTRCQDTVIGVPGKIKGISGGEM
KRLSFASEVLTNPPLMFCDEPTSGLDSFMAQNVVTVLKSLAEKGKTIVCTIHQPSSEVFSMFDKILLMAEGRVAFLGTPS
EAIDFFKTSVLLLLSMYSMKNKTNKYPCGKCLANVSKCSKAVLCKGSCNQWLHLKCTDLSKEDYERIKKSIIKKWLCSNC
ELADIDEEIEVEDRVLYVELKEELESQELIIKNLSEDLAKANDEIKNVSTYTLNLETLVLKKEESIELLERKVKEISENK
SECKCLNKYKATGPRRSLPAKLSTPVSSIMNKNNRLDSEKNKELPYTVVKNRKQKHATNIIFQNKDLNFISKNQYEVLSV
EEEEEENGPKEQPVQTSSREKKKLLICADSHGRDLAWNLNQTQHTYEAVGFVRPGGRTGQVLDNHNIEEEKLGEEDGLVI
LCGTNDVAINNAQDAIKNIELVLNKITSTVSKIVVVDIPRRYDLVEWSCVNQEVKKTNCALKEMCNKFRDVSLVEVSRAE
RHLHTRHGMHLNRRGKMWLAHQIARVLDSKQEQETYNVSPTLRTGSEESVADAMMTTEISTPTTEDSTTSSGNSPLQTPT
HNRMGAVCPSHYNPADFFIQLLAVVPNAEESCRNMIEMVCDSFATSEIGSKISMLAEVGGGTKVKSAWNWSDPFNNSVSM
YKASWCAQFRAVFWRSWLSVNKEPVLIKVRILQTLMVSLMVGIIYFGQDYDQDGVMNINGALFICISNMTFQNVFAVITV
FCSEMPVFMREHYNGMYRTDVYFLCKTLAEVPIFLVIPVLFTCIMYYMVGLNPDPSRFFQSIVIITLVSNVATSFGYFIS
SVSSSIAVALSIGPPIIIPFLLFGGFFLNVGSVPPYFKWLSHLSWFKYGNEALLINQWDNIKDIACTRSNTTCPSDGHVV
LEQFNFSERNYIWDYIWLVVLIIGFRVVAFLALLVRTSRRR*

***w¹* deduced protein (299 residues)**

MLIREVANKVIEMPCAQNHRNGSQKELSNGLYLELSDTEKKPQVNGYSSGSGGSGSPYSTVSILPKENITYTWSNVNVFT
RLEHRQNRVVNLVHNVVHRDRPQQRKHILKNVTGVAYPGELMALMGSSGAGKTTLLNSLTFRAPKTLAVTGHRAINGVPV
DANALAALSAYVQQDDLFIGTLTVREHLIFQALVRMDRHIPYVQRMIRVEEVINDLMLTRCQDTVIGVPGKIKGISGGEM
KRLSFASEVLTNPPLMFCDEPTSGLDSFMAQNVVTVLKSLAEKGKTIVCTIHQPSSVCI*

***w²* deduced protein (323 residues)**

MLIREVANKVIEMPCAQNHRNGSQKELSNGLYLELSDTEKKPQVNGYSSGSGGSGSPYSTVSILPKENITYTWSNVNVFT
RLEHRQNRVVNLVHNVVHRDRPQQRKHILKNVTGVAYPGELMALMGSSGAGKTTLLNSLTFRAPKTLAVTGHRAINGVPV
DANALAALSAYVQQDDLFIGTLTVREHLIFQALVRMDRHIPYVQRMIRVEEVINDLMLTRCQDTVIGVPGKIKGISGGEM
KRLSFASEVLTNPPLMFCDEPTSGLDSFMAQNVVTVLKSLAEKGKTIVCTICAPKTIGILHVRQDLAHGRGSCGIPWNSI
RSH*

***w³* deduced protein (324 residues)**

MLIREVANKVIEMPCAQNHRNGSQKELSNGLYLELSDTEKKPQVNGYSSGSGGSGSPYSTVSILPKENITYTWSNVNVFT
RLEHRQNRVVNLVHNVVHRDRPQQRKHILKNVTGVAYPGELMALMGSSGAGKTTLLNSLTFRAPKTLAVTGHRAINGVPV
DANALAALSAYVQQDDLFIGTLTVREHLIFQALVRMDRHIPYVQRMIRVEEVINDLMLTRCQDTVIGVPGKIKGISGGEM
KRLSFASEVLTNPPLMFCDEPTSGLDSFMAQNVVTVLKSLAEKGKTIVCTIHQPSSVISILHVRQDLAHGRGSCGIPWNS
IRSH*

FAD-binding domain Transmembrane domain ATPase domain ABC domain