

Supplementary material**A COP9 signalosome-like complex is a regulator of mating pheromone response in *S. cerevisiae*.**

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Supplementary Tables and Figures

Supplementary Table 1.

A

	yCsn9	yCsn10	yCsn12	yPci8/Csn11
hCsn1	17.0	11.8	14.6	10.8
hCsn2	16.0	11.8	10.7	16.2
hCsn3	11.9	11.7	14.4	6.7
hCsn4	12.2	16.0	14.0	11.0
hCsn7a	16.9	10.6	12.5	8.5
hCsn7b	17.8	13.5	10.6	8.5
hCsn8	8.0	10.6	7.8	6.9

B

	yCsn5
hCsn5	52.2
hCsn6	18.9

Table 1.

Pairwise identity values of CSN subunits from human and the newly identified complex in budding yeast.

A. The CSN-like complex identified in *S. cerevisiae* contains four PCI subunits that co-interact while the CSN from other eukaryotes contains 6 PCI proteins. The % identities between all PCI components are shown. The best match is shown in bold, however, the extremely low levels of % identities obstruct assignment of direct orthologs between the PCI subunits from budding yeast and those from other organisms (human in this case).

B. ydl216c encodes for a homologous subunit of Csn5 from other eukaryotes and is referred to as Csn5. The % homology of this MPN subunit with its presumed ortholog, Csn5 is shown as well as with Csn6, an additional MPN protein that is found in the CSN from other eukaryotes but not present in budding yeast.

Supplementary Figure 1

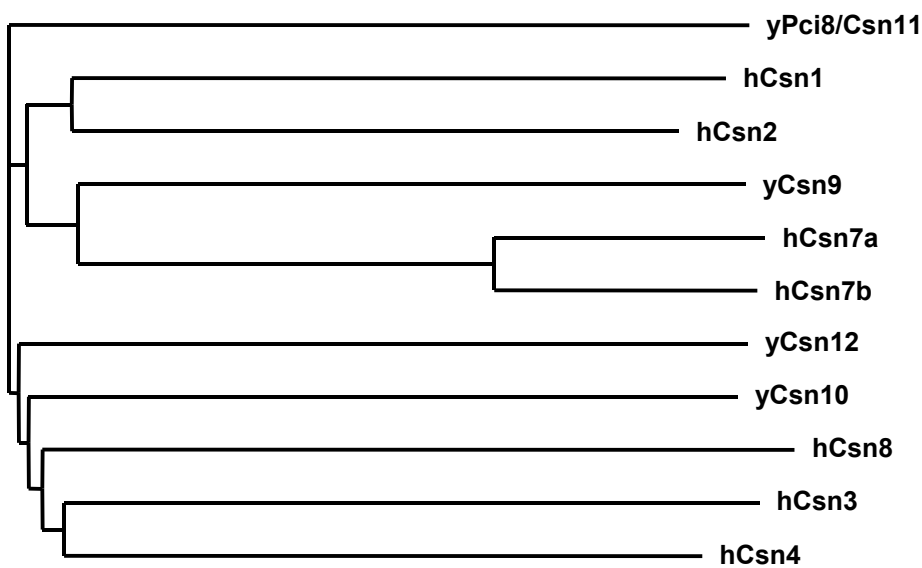


Figure 1. Dendrogram analysis of PCI subunits from yeast and human. All subunits have a common evolutionary precursor. Notice that evolutionary distance is not always correlated with the % identity of each possible pair (shown in Table 1). For this reason, a direct ortholog relationship is not claimed for newly identified CSN and they are given numerical suffixes that do not correspond to previously identified CSN subunits.

Supplementary Figure 2

A

yCsn9 1 MVMREETIKSLEDPYKYHYKEEWLNT.KDPDEQQLFEIFAFGNIKDLPENII...LTSLMRSKTEKLTIVTSE
yCsn10 430 NVLEDVYRCFAQLELRQLNASLIP.....ELSVVLSGI....IQDIYYLAQTLKLRKAR
yCsn12 298 QVYPTLVRSVISGNLSLYEATAASHE.....RFFLSQGL...HVVITLREVVFTRLVQRCW
yPci8 258 PLIVNCLELLINTNFNKFVKIWHGEI.....NKICMESLFLEPSWSSSAAVIMRCKIYFFYLR
hCsn1 333 PQVRDIIFKIEYESKYASCLKMIDEMK.....DNLLIDMY..LAPHVRTTYQIRNRALIQYFS
hCsn2 309 LAMTNLVSANQNNDITEFEKILKTNH.....SNIMDDPF..IREHIEELLRNIRTOVLIKLIK
hCsn3 238 NAYHELAQVYSTNNPSELRNLVNKHS.....ETFTRDNN...MGLVKQCLSSLYKKNIQRLTK
hCsn4 252 LEKMYLDRIIRGNLQEFAMLMPHQ.....KATTADG.....SSIIDRAVIEHNLISASK
hCsn7a 32 HQVLEAPGVVVFGEILLDMPNVRELAESDFASTFRLLTVFAYGTYADYLAEAR.NLPPLEAQKNKLRHLSVVTAA
hCsn7b 32 SQVLEAPGVVVFGEILLELANVQELAEGANAAYLQLLNLFAFGTYPDYIANKE.SLPELSTAQQNKLKHILTIVSLAS
hCsn8 72 GGIWSVGQRIWQRDFPGIYTTINAHQ.....WSETVQP.....IMEALRDATERRAFALVSO

yCsn9 71 IYNELSYELIKEECQIE.....DDGIIESHLLIQLO....NIFKAEVMSVSKSMKFSR
yCsn10 484 LYSCISISDIISMLQIS.....DDNEMTRDDILTLIRSTMK.NRSVVYFKLDLTSDLVYFGD
yCsn12 352 QWGNDRKSINPLKILLATKQHDSSANEDEEEQIDALECRLASATAS...GLLRAYLSHSNRCLVFSK
yPci8 316 ISKKLQFSYLSSTLIGID.....LEDIKEELTKLIIS...GQLNFEIDGDVIHFEDSS
hCsn1 389 PYVSADMHRMAAAFNTT.....VAALEDELTOQLLE...GLISARVDSHSHKILYARD
hCsn2 365 PYTRIHIPFISKELNID.....VADVESLLVQCILD...NTIHCRIQVQNQLLELDH
hCsn3 293 TFLTSLSQDMASRVQLS.....GPQEAKEYVLMHTED...GEIFASTINQKDGVMVSFHD
hCsn4 303 LYNNITFEELGALLEIP.....AAKAEKIASQMIIE...XRMNGFIDQIDGIVHFET
hCsn7a 107 KVKCIPYAVLLEALALR.....NVRQLEDLVIEAVYA...DVLRCGLDQRNQRLEVDY
hCsn7b 107 RMKCIPYSVLLKDLER.....NIRELEDLIEAVYT...DIIOCKLDQRNQLLEVDF
hCsn8 124 AVTSIIADDFAAFVGLP.....VEEAVKGIIEQGWQADSTTRMVLPRKPVAGALDVSF

B

yCsn5 89 SKLSCEKITHYAVRGGN.....IEIMGILMGFTLKDNIIVMDCENLPVVGTETRVNAQLESYEYMQYIDEMYNH
hCsn5 58 SALALLKVMVHARSGGN.....LEVMLMLGKVDGETMIIMDSFALPVEGTETRVNAQAAAYEYMAAYIEN....
hCsn6 14 HPLVILNISDHWIRMRSQEGRPVQVIGALIGKQEGRNIEVMNSFELLSHTVE...EKIIDKEYYYTKEEQ....

yCsn5 159 NDGGDGRDYKCAKLNVVGWFEHSHPGYDCWLSNIDIQTQDLNQRFQDPYVAIVV
hCsn5 124AKQVGHLENAIGWYHSHPGYGCWLSGIDVSTQMLNQRFQEPFVAVVI
hCsn6 82FKQVFKLEFLGWYTTGGPPDPSDIHVHKQVC....EITTSPLFLKIL

Figure 2. Definition of PCI and MPN motifs. Sequence alignment of PCI domain (A) or MPN domain (B) is shown for all CSN subunits from yeast and human.