

Table S1. Analytical Equilibrium Ultracentrifugation Statistics, Related to Figure 1

| Sample | ImI3 | | ImI3- ChI4 ³⁶¹⁻⁴⁵⁸ | ImI3- ChI4 ^{full-length} |
|--------------------------|---------|---------------|----------------------------------|--------------------------------------|
| Model | monomer | monomer:dimer | monomer | monomer |
| MW _{obs} (kDa) | 41251 | 27000 | 39317 | 80896 |
| MW _{calc} (kDa) | 28066 | | 38804 | 80720 |
| chisq | 16.2 | 12 | 12.5 | 13.8 |
| locrmsd | .020 | .099 | .019 | .019 |

Table S2. Crystallographic Statistics, Related to Figure 2

| Data Collection | Iml3 ^{full-length} | Iml3 ^{full-length} _ Chl4 ³⁶¹⁻⁴⁵⁸ |
|---------------------------------------|-----------------------------|--|
| Resolution (Å) | 38 – 2.5 | 36 – 2.3 |
| Wavelength (Å) | 0.97919 | 0.97919 |
| Space Group | P6 ₃ 22 | I222 |
| Unit Cell Dimensions (a, b, c) (Å) | 73.14, 73.14, 189.13 | 38.48, 143.92, 146.91 |
| Unit Cell Angles (α, β, γ) (°) | 90, 90, 120 | 90, 90, 90 |
| I/σ (last shell) | 16.8 (2.5) | 23.1 (3.1) |
| R _{sym} (last shell) (%) | 11.4 (77.4) | 7.6 (45.3) |
| Completeness (last shell) (%) | 99.6 (99.3) | 98.9 (91.4) |
| Number of Reflections | 146894 | 134470 |
| unique | 19606 | 19061 |
| Number of Se Sites | 9 | - |
| Mean Figure of Merit | .394 | - |
| Refinement | | |
| Resolution (Å) | 38 – 2.5 | 36 – 2.3 |
| Number of Reflections | 11048 | 18652 |
| working | 9944 | 16786 |
| free | 1104 | 1866 |
| R _{work} (last shell) (%) | 22.4 (26.9) | 18.3 (24.1) |
| R _{free} (last shell) (%) | 25.6 (31.9) | 21.1 (27.5) |
| Structure Statistics | | |
| Number of Atoms (protein) | 1787 | 2565 |
| solvent | 32 | 136 |
| r.m.s.d. bond lengths | 0.004 | 0.009 |
| r.m.s.d. bond angles | .81 | 1.18 |

Table S3. Yeast Strains Used in This Study, Related to Figure 3

Strains built in the W303 a mating type background:

| Strain Number | Relevant Genotype | Reference |
|---------------|--|-----------|
| YNJN1 | MATa, ade2-1, leu2-3, ura3, trp1-1, his3-11,15, can1-100 | - |
| SMH25 | iml3Δ:: KanMX6 | This work |
| SMH26 | chl4Δ:: KanMX6 | This work |
| SMH27 | IML3(L173R)::KanMX6 | This work |
| SMH28 | IML3(G197R)::KanMX6 | This work |
| SMH84 | IML3(M198G)::KanMX6 | This work |
| SMH128 | CHL4(L416R)::KanMX6 | This work |
| SMH129 | CHL4(I422R)::KanMX6 | This work |
| SMH30 | CHL4(P428R)::KanMX6 | This work |
| SMH130 | CHL4(W430R)::KanMX6 | This work |
| SMH132 | CHL4(L416R;P428R)::KanMX6 | This work |

Diploid strains built in the W303 background

| Strain Number | Relevant Genotype (MATa/MATα) | Reference |
|---------------|--|-----------|
| SMH140 | IML3 / iml3Δ:: TRP1, pHis3-GFP-LacI::URA3 / ura3-1, leu2-3, 112 / lacO-256::LEU2 | - |
| SMH141 | iml3Δ:: KanMX6 / iml3Δ:: TRP1, pHis3-GFP-LacI::URA3 / ura3-1, leu2-3, 112 / lacO-256::LEU2 | This work |
| SMH142 | IML3(G197R) / iml3Δ:: TRP1, pHis3-GFP-LacI::URA3 / ura3-1, leu2-3, 112 / lacO-256::LEU2 | This work |