

Table S1 Primers for mapping NG6, NG30 and *ac17*

| Marker | Sequence 5' to 3' | Sequence 5' to 3' | Map Position JGI v4 | Temperature | Restriction Enzyme |
|---------------|----------------------|----------------------|------------------------|-------------|-----------------------|
| Chromosome 12 | | | | | |
| 160081 | TTG GAG TTT | CCA GCC CCA | 3884888- | 53°C | <i>HaeIII</i> |
| | GAG CTG CAA | TGA GAA CTA | 3885293 | | |
| | TG | AA | | | |
| 160178 | AGC TGG ACC | ATG CCG TAC | 4089949- | 53°C | Size difference |
| | TGG TTC AAA | TCC CAC CTG | 4090378 | | |
| | TG | | | | |
| 160043 | GCG AGA TCA | GCA TGC GCT | 4234642- | 53°C | <i>HaeIII</i> |
| | TCA CGG ACT | TGC ATA CTA | 4234935 | | |
| | TC | TC | | | |
| Bug24 | GAC ATC GAA | AGT CAA GCA | 4289729- | 53°C | <i>MspI</i> |
| | TCT TCC CAA CG | CTT GCC GAG | 4290144 | | |
| | | AT | | | |
| 160152 | CTG AAA GAG | CTG CAT CGT | 4321000- | 54°C | <i>MspI</i> |
| | CGG ATT GTG | GTC GTA AAT | 4321370 | | |
| | GT | GG | | | |
| 160146 | TGG TCA CGT | CCC TGA CAA | 4335619- | 52°C | <i>RsaI</i> |
| | AGC TGC ATA | ACA CCA CAC | 4388402 | | |
| | GC | AC | | | |
| Fla8 | TAT CAA GCC | CGG ATG TGT | 4462079- | 53°C | <i>RsaI</i> |
| | CAC GGG AGT | TAC GAG TGT | 4462321 | | |
| | AG | CG | | | |
| 160197 | AGG AAG CCC | CAT AGT ACC | 4485972- | 53°C | Size difference |
| | GTG TGT GTA T | CGG ACG CTT | 4486542 | | |
| | | GT | | | |
| 160085 | CCT CTC CTT | TGG GTG GGC | 4543180- | 53°C | <i>MnII</i> |

| | | | | | |
|---------------------|-----------------|----------------|-----------|------|-----------------|
| | TTG GAA TGA | ACC TAA TAC | 4543569 | | |
| | CG | AC | | | |
| 269006 | GGC AGG AGG | CCC ACC TCA | 4605260 - | 55°C | Size difference |
| | GAA GTG GAG | ACA CAC ACA | 4605589 | | |
| | | CA | | | |
| 380038 | ATC ATC TGT | GCC CGT GTA | 4964322- | 53°C | Size difference |
| | GTG CCC ATG C | TCC TGT CAA TC | 4964798 | | |
| LC3 | TGC ACA ACA | ACA GGC GAG | 5150218 - | 53°C | <i>HaeIII</i> |
| | CAA CAA GCA | GAC ACA GCT | 5150592 | | |
| | GA | AC | | | |
| NPHP4 | Cca tgc tgg gtg | GGG TCC ACC | 5408391- | 53°C | <i>MspI</i> |
| | aa tga t | TCG TTG ATC T | 5408949 | | |
| Chromosome 3 | | | | | |
| DMAT | GGA CAT TCG | AGG AAA CGC | 2766483- | 50°C | Size difference |
| | TGT GGA GTG | AGT CAA GGG | 2766784 | | |
| | AA | TA | | | |
| TUA1 | GGC CAT GAG | AGG AAA CGC | 5007715- | 53°C | <i>MspI</i> |
| | TTG CTT CTT TC | AGT CAA GGG | 5008194 | | |
| | | TA | | | |
| PHOT | TGC AGT TTT | CTG CCG TCC | 5939889- | 51°C | <i>DdeI</i> |
| | GCA GTT TGG | ATG TTC CTT AT | 5940314 | | |
| | AG | | | | |
| 120055 | GTG ATG GGC | GCT GTC CAG | 6274237- | 53°C | <i>HaeIII</i> |
| | TAC CAG ACG | GTT CTT CAG | 6274567 | | |
| | TT | GA | | | |
| IFT80 | TTG TGC AAG | GCT GCT GTT | 6607725- | 53°C | <i>AlwNI</i> |
| | TGT CGT GTC | AAT TCG CTG | 6608200 | | |
| | AA | TG | | | |
| 120206 | Acg cgc tgt gta | TCT GCA GCG | 6731486- | 51°C | <i>DdeI</i> |

| | | | | | |
|--------|-------------|-------------|----------|------|-----------------|
| | acg agt c | TGT TGT TAC | 6731869 | | |
| | | AG | | | |
| 953 | GTG TGC GTG | CGC AGG ACA | 6840208- | 53°C | Size difference |
| | TCA GTA TGA | GTG TAC CTA | 6840425 | | |
| | GCT GG | CCG TTT | | | |
| 120019 | GCA CAT GCC | AGC GCT ACA | 7043084- | 50°C | <i>MspI</i> |
| | ATC ATA TCA | CCA GAA CGA | 7043541 | | |
| | GC | GT | | | |
| 751 | AAA CCC ACA | GCC ATG GTG | 7516918- | 53°C | Size difference |
| | TAA CCC ACA | CAG TGT AGA | 7517293 | | |
| | GG | GA | | | |

* Primers 160146 produce a PCR product of 290 bps although Version 4 of the Chlamydomonas genome assembly places them 48.78 kb apart. This marker is linked to NG6. This suggests a small misassembly in Version 4.