**Table S3**

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| **Oligo name** | **Sequence (5’-3’)** | **construct** |
|  |  |  |
| EF5'-F | CGGggtaccAGCTTAATTCTTTTCGAGCTCTTTATG | ef1-PfKAHRP-GFP |
| EF5'-R | CGGctcgagaggcctGATCCCCCTATGTTTTATAAAATT |  |
| CAM3'-F | CGGctcgagATTATTAATATATATGAATATATATACATCG |  |
| CAM3'-R | CGGgatatcGACCATATAAGAATTAACCCTTTAC |  |
| GFP5'-F | CCACCATCACCATcctaggAGTAAAGGAGAAGAACTTTTCACTG |  |
| GFP3'-R | CGGctcgagTTATTTGTATAGTTCATCCATGCCAT |  |
| KAHRP-F | CGGaggcct**ATG**AAAAGTTTTAAGAACAAAAATACTTTG |  |
| KAHRP-R | TTACTcctaggATGGTGATGGTGGTGATGGTGTTC |  |
| PB403061-F | GCGaggcct**ATG**AGAGTCAGTATTTTAAAATATGTTC | Pb124660-GFP (PbCP1) |
| PB403061-R | GCGcctaggTTTTGGTATTTTTTTTAATTTAAAGTTAC |  |
| PB403086-F | GCGaggcct**ATG**AGAGTCAGTATTTTAAAATATGTTC | Pb124710-GFP |
| PB403086-R | GCGcctaggTATTTTTCTTAATTTAATGGAATATTTAATAAG |  |
| PB106385-F | GCGaggcct**ATG**AATACCTATTCAAAATTTTCAAAAATG | Pb114540-GFP |
| PB106385-R | GCGcctaggGCTTTGTATGTCCTTCAAAAACTGCTTAATG |  |
| PB106385F2-R | GCGcctaggGGTACCTTGGTCGCCACTTC | Pb114540F2-GFP |
| PB106385F3-R | GCGcctaggTTGGCGCATCTTGTTATGAGC | Pb114540F3-GFP |
| PB101512-F | GCGaggcct**ATG**AGAATCAGTATTTTAAAATATGTTC | Pb021540-GFP |
| PB101512-R | GCGcctaggTTTTAATTTAAAGCGATTATTTCTGG |  |
| PB103567-F | GCGaggcct**ATG**AGAGTCAGTATTTTAAAATGTGTTC | Pb021580-GFP |
| PB103567-R | GCGcctaggTTTTGATATTTTTTCTAATTTACGTTCAC |  |
| PB106995-F | GCGaggcct**ATG**TGTAGTTTAGTTAACATTGTTTCTTG | Pb070060-GFP |
| PB106995-R | GCGcctaggTTTATAAAGTGGAATATTGTTCCTATTGGG |  |
| PB108495-F | GCGaggcct**ATG**AGAGTCAGTATTTTAAAATGCGTTC | Pb000080-GFP |
| PB108495-R | GCGcctaggTTTTGATATGCTTTCTAATTTAAAGATAC |  |
| PB104040-F | GCGaggcct**ATG**AAAAAATCAAATATTTTTAATAAAATATTATTGC | Pb031630-GFP |
| PB104040-R | GCGcctaggGCGGGAATATTTTTTCATTATTTTTCTTATTTTATG |  |
| PB106275-F | GCGaggcct**ATG**GCTCGTAATTGCGAATGCAAAAAGATAG | Pb136550-GFP |
| PB106275-R | GCGcctaggCATAGGTTTTGCTCTACAAAATATGTTAG |  |
| PB108030-F | GCGaggcct**ATG**AATACTGATAAATTTTCGCAAATTTCG | Pb140070-GFP |
| PB108030-R | GCGcctaggCGAAGAATTTATATGAATATAATACAATAC |  |
| Pb1d1-R | GCGcctaggCAGGATGTATTTGATTGCTTCTTTTCT | PbCP11-GFP |
| Pb1d2-R | GCGcctaggTTTTTTTATTATTTTTTTATTCTCTATCGGCTGTATTGCTAATTCATC | PbCP12-GFP |
| Pb1d3-R | GCGcctaggTGTTTTACTTCCTTTATGCTTCTTTATATG | PbCP13-GFP |

**Table S3**

|  |  |  |
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| **Oligo name** | **Sequence (5’-3’)** | **construct** |
|  |  |  |
| Pb1d4-R | GCGcctaggATATGCTAATATCCTATTATTTCTAAAGTT | PbCP14-GFP |
| Pb1TM-S | ACATCAAGTAATCGTCATATGAAATCAAAATTGACTAAA | Pb400PbCP1TMD-GFP |
| Pb1TM-AS | GATTGCTTCTTTTCTATATTTTTTAGTCAATTTTGATTTCAT |  |
| PB107834-R | GCGcctaggTATTTTTTTTAATTTAAAGGAACATTTAATA | Pb400-GFP |
| Pb107TM-S | TGCATCAAGTAATTGCTATATGAAATCAAAATTGACTAAA | PbCP1Pb400TMD-GFP |
| Pb107TM-AS | CTGATTAATTCTTTTTTAATTTTTTTAGTCAATTTTGATTTCAT |  |
| Pb1R>A-S | CTTTAGAAATAAT**gcc**ATATTAGCATATGCAGATAACC | PbCP1R>A-GFP |
| Pb1R>A-AS | GGTTATCTGCATATGCTAATAT**ggc**ATTATTTCTAAAG |  |
| Pb1L>A-S | CTTTAGAAATAATAGGATA**gcc**GCATATGCAGATAACC | PbCP1L>A-GFP |
| Pb1L>A-AS | GGTTATCTGCATATGC**ggc**TATCCTATTATTTCTAAAG |  |
| Pb1Y>A-S | CTTTAGAAATAATAGGATATTAGCA**gcc**GCAGATAACC | PbCP1Y>A-GFP |
| Pb1Y>A-AS | GGTTATCTGC**ggc**TGCTAATATCCTATTATTTCTAAAG |  |
| Pb15'-F | GCGatcgatGTATATATGATATATGCCAAGAAG | PbCP1KO (5’ flank) |
| Pb15'-R | CGGaagcttGAGATCATGGTGATAACTTGA |  |
| Pb13'-F | CGCggatccGCTTTATTATACATGCTTAAATGGCT | PbCP1KO (3’ flank) |
| Pb13'-R | GCGtctagaGATATCGTTGTGTCATCGAACTTCG |  |
| Pb1dTMD2-R | GCGcctaggGCTCGGCAACCCTATTATTGGTATCG | PbCP1TMD2-GFP |
| Pb1dTMD1-S | GAAATTACATCAAGTAATCGTCATGGGTTGCCGAGCTTAATGATACTAC | PbCP1TMD1-GFP |
| Pb1dTMD1-AS | GTAGTATCATTAAGCTCGGCAACCCATGACGATTACTTGATGTAATTTC |  |
| Pb107-AS | CTTTTTAAATATTTTATCTCATTTTGCATATAGCAATTACTTGATGCAA |  |
| PB106275TM-S | GAAATTACATCAAGTAATCGTCATATGTTAACAAAAGTCTTTGTTGATAATTTG | PbCP1IBIS TMD-GFP |
| PB106275-AS | CAAATTATCAACAAAGACTTTTGTTAACATATGACGATTACTTGATGTAATTTC |  |
| PB106275TM-S2 | TTGCATCAAGTAATTGCTATATGTTAACAAAAGTCTTTGTTGATAATTTG | Pb400 IBIS TMD-GFP |
| PB106275-AS2 | CAAATTATCAACAAAGACTTTTGTTAACATATAGCAATTACTTGATGCAA |  |
| PB107834-R2 | cctagg*TCCTCCTCCTTTGGG*TATTTTTTTTAATTTAAAGGAACATTTAAT | Pb400PK3xG-GFP |
| PB403086-R2 | cctagg*CCCTCCTCCTCCTCC*TATTTTTCTTAATTTAATGGAATATTTAATAAG | Pb1247105xG-GFP |
| PB108495-R2 | cctagg*CCCTCCTCCTCCTCC*TTTTGATATGCTTTCTAATTTAAAGATAC | Pb0000805xG-GFP |
| PB108030-R2 | cctagg*CCCTCCTCCTCCTCC*CGAAGAATTTATATGAATATAATACAATAC | Pb1400705xG-GFP |
| HA-F | cctaggATGGCATACCCGTACGAC | Pb400-3xHA/Strep |
| Strep-R | ggactcgag**TTA**TTTTTCAAATTGTGGATGTGA |  |