

1 **Supplementary materials**

2 **Supplementary Figure 1.**

3 Phylogenetic analysis of Pmt proteins in filamentous fungi and yeasts. Genetyx  
4 software with an UPGMA method was used for constructing the phylogenetic tree.  
5 UniProt database accession numbers for the proteins are as follows. *CnPmt1*,Q5KIZ1;  
6 *CnPmt2*,Q5KAF1; *CnPmt4*,A3E242; *SpOma1/Ogm1*,O13898;  
7 *SpOma2/Ogm2*,Q9C100; *SpOma4/Ogm4*,O42933; *ScPmt1*,P33775; *ScPmt2*,P31382;  
8 *ScPmt3*,P47190; *ScPmt4*,P46971; *ScPmt5*,P52867; *ScPmt6*,P42934; *CaPmt1*,O74189;  
9 *CaPmt2*,Q5ADM9; *CaPmt4*,Q59X23; *CaPmt5*,Q5ACU3; *CaPmt6*,Q5A688;  
10 *AfPmt1*,B0XYZ3; *AfPmt2*,B0XPY7; *AfPmt4*,B0YA13; *AnPmtA*,Q96WN5;  
11 *AnPmtB*,Q5B3W9; *AnPmtC*,Q5BDC1; *AaPmtA*,Q96VV1; *NcPmt1*,Q7SH94;  
12 *NcPmt2*,Q1K4Z4; *NcPmt4*,Q7SD53. *Cryptococcus neoformans*, *Schizosaccharomyces*  
13 *pombe*, *Saccharomyces cerevisiae*, *Candida albicans*, *Aspergillus fumigatus*, *A.*  
14 *nidulans*, *A. awamori*, and *Neurospora crassa* are abbreviated as *Cn*, *Sp*, *Sc*, *Ca*, *Af*,  
15 *An*, *Aa*, and *Nc*, respectively.

16

17 **Supplementary Figure 2.**

18 Disruption of *Anpmt* genes. Schematic representation of the disruptions of *AnpmtB*  
19 (A), *AnpmtC* (B), and *AnpmtApmtB* (C) and recombination of *AnpmtB* (D) and  
20 *AnpmtC* (E). Southern blot analysis of total DNA isolated from strain AKU89 (lanes 1  
21 and 3) or from the respective disruptants (lanes 2 and 4) are shown in the panels on the  
22 right (A, B, C). Probes were derived from retained regions of *AnpmtA* (A and C) and  
23 *AnpmtB* (B and C) as indicated. PCR using total DNA isolated from strain AKU89  
24 (lane 2), from the  $\Delta$ *Anpmt* (lane 2), or the recomplemented strains (lane 4) are shown  
25 in the panels on the right (D, E).  $\lambda$  DNA digested with *HindIII* was used as a size

1 marker (lane1).

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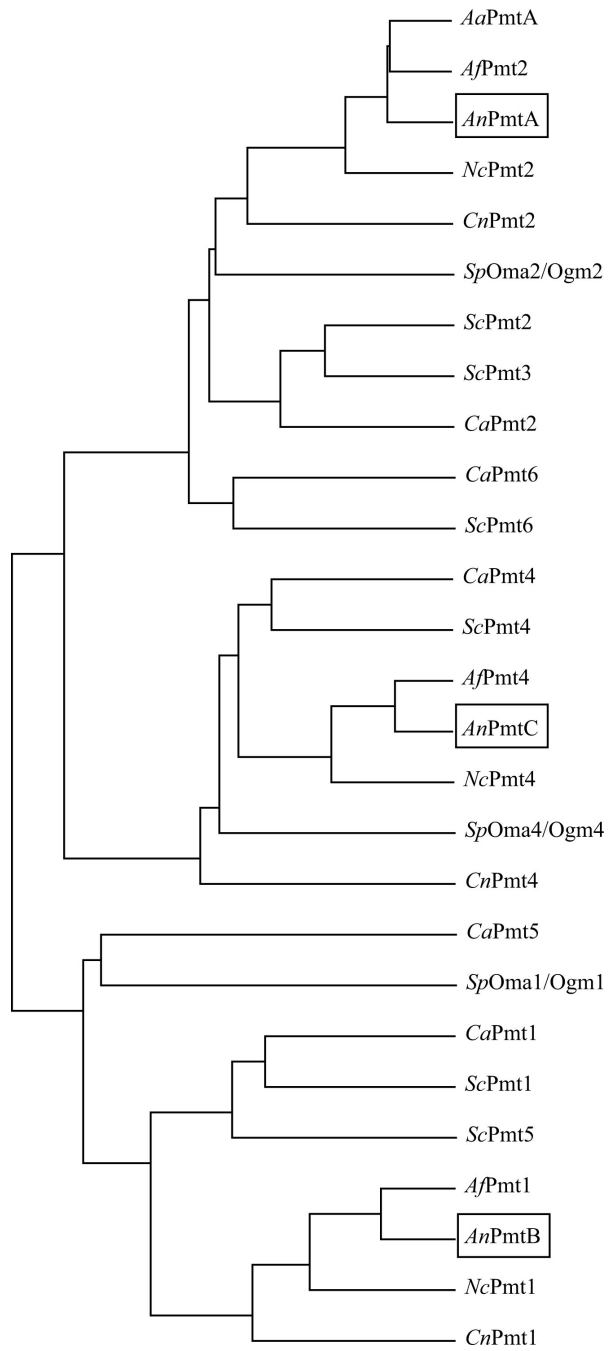
3 **Supplemental Table. Oligonucleotides used in this study**

| Oligonucleotide primers | Sequence  | Restriction site (underlined)                                 |
|-------------------------|---|---|
| pmtB-F                  | 5'-ATTYWTIGAYGTICAYCCICC-3'                     |   |
| pmtB-R                  | 5'-AGGRAARTARTGRTGIARRAA-3'                     |   |
| pmtC-F                  | 5'-TTYGAYTNCAYCCICCITT-3'                       |   |
| pmtC-R                  | 5'-TANCCNGTIACYTYGTGICC-3'                      |   |
| An-pmtB-RT-F            | 5'-ATGGCGAAGGACACCCCTGGA-3'                     |   |
| An-pmtB-RT-R            | 5'-TTCATTGAGACCGGAATCGGAGT-3'                   |   |
| An-pmtC-RT-F            | 5'-ATGGGATTATCGGCTGGCCATTACCAT-3'               |   |
| An-pmtC-RT-R            | 5'-TTTCGCGAAGTGCAAGTCATAGCCAAG-3'               |   |
| F1-PnkuB                | 5'- <u>GATATCGGACCTTCTTGACTGGACC</u> -3'        | <i>EcoRV</i>  |
| R1-PnkuB                | 5'-CGCAGAGGTGACCGAAGTCGATATGTGTGAGACGCAAACA-3'  |   |
| F2-aur                  | 5'-TGTTTGCGTCTCACACATATCGACTTCGGTCACCTCTGCG-3'  |   |
| R2-aur                  | 5'-CTCCTTAGGAACATTACTCCTTCAAGGGCTGAAAGTATGCC-3' |   |
| F3-TnkuB                | 5'-GGCATACTTTCAGCCCTTGAAGGAGTAATGTTCTTAAGGAG-3' |   |
| R3-TnkuB                | 5'- <u>CGATATCAGTGCCTTCCC</u> -3'               | <i>EcoRV</i>  |
| pmtB-around-F           | 5'-AATCTAGAAGGCCTAGGACCGTAGGTGTATTCCC-3'        |   |
| pmtB-around-R           | 5'-AAAAAACAGCTGAATTCTCCCCTAAATTCG-3'            |   |
| ptrA-KpnI-F             | 5'-AAAGGTACCGGGGTGACGATGAGCCGCTC-3'             | <i>KpnI</i>   |
| ptrA-KpnI-R             | 5'- <u>TGGTACCGGGCAATTGATTACGGGATCC</u> -3'     | <i>KpnI</i>   |
| pmtB-pr-F               | 5'-GGTTTTCTGGCGATGCAAA-3'                       |   |
| pmtB-pr-R               | 5'-TGAATTCTTATTTCATTGAGACCGGGAATC-3'            |   |
| F2-AnpmtB               | 5'-TTAAGTTCGACATGACACCTTCCGGAGCGTG-3'           | <i>Sall</i>   |
| R2-AnpmtB               | 5'-CACCGTTCGACGATGACTTTTAGATAGTGTCAG-3'         | <i>Sall</i>   |
| F1-AnpGpB               | 5'-GGATTTGATGTAATGTAGTCGACATGACACCTTCCG-3'      |   |
| R1-AnpGpB               | 5'-CGGAAGGTGTCATGTGCGACTACATTTACATCAAATCC-3'    |   |
| F2-AnpGpB               | 5'-TCTAAAAGTCATACGTCGACGAGTGGAAATGTGTAACGG-3'   |   |
| R2-AnpGpB               | 5'-CCGTTACACATTTCCACTCGTCGACGTATGACTTTTAGA-3'   |   |
| F-AnpmtBPr              | 5'-CCGAGATCACCGTCAGGT-3'                        |   |
| R-AnpmtBPr              | 5'-GCGGGGAAATAGTGGTGTAA-3'                      |   |
| pmtC-around-F           | 5'-AATCTAGAAGGCCTACGCGTGCTTATACCGGAAT-3'        |   |
| pmtC-around-R           | 5'-TTTCGCGAAGTGCAAGTCATAGCCAAG-3'               |   |
| pmtC-pr-F               | 5'-ATAAAGCTTCCATCACTATGCGCCAC-3'                |   |
| pmtC-pr-R               | 5'-TTTCGCGAAGTGCAAGTCATAGCCAAG-3'               |   |
| F1-AnpyrG               | 5'-CACCATGCATGATTGGTATGTTTCTCGGA-3'             | <i>NsiI</i>   |
| R1-AnpyrG               | 5'-TAGGGCATGCTTCCTCTAGCGCAAACAAGTTC-3'          | <i>SphI</i>   |
| F3-AnpmtC               | 5'-CACAGTCGACGTCTTCACTTGGTGGAGATATA-3'          | <i>Sall</i>   |
| R3-AnpmtC               | 5'-CCAAGTCGACATTCGGGCGCTATATCAGG-3'             | <i>Sall</i>   |
| F-AnpmtCPr              | 5'-ATGTCTTCATCGCCCTCTCTG-3'                     |   |
| R-AnpmtCPr              | 5'-ATGGCGAAGCTGGACGATATC-3'                     |   |
| F1-PglaA                | 5'-AAGCTTGTC AAGGGACAGCAAGTAT-3'                | <i>HindIII</i>  |
| R1-PglaA                | 5'-GGTACCTCGCTTTTCTTTGAGGGAC-3'                 | <i>KpnI</i>   |
| argB-ApaI-F             | 5'-GGGCCCCGATGCAATAATTGCAGCAA-3'                | <i>ApaI</i>   |
| argB-ApaI-R             | 5'-GGGCCCCGTCGACCTACAGCCATTGCG-3'               | <i>ApaI</i>   |
| F2I-TglaA               | 5'-GATATCAGATCTTAGACTATTTCCTATTGAT-3'           | <i>EcoRV</i>  |
| R2I-PglaA               | 5'-GAATTCGCGGCCGCTGGGGGAGTAACGATGTTGA-3'        | <i>BglII</i> (double)<br><i>EcoRI</i><br><i>NotI</i> (double) |
| F1-5660.2-exp           | 5'-AAGACCATGGGGTCGTTACGCTATCCAC-3'              | <i>NcoI</i>   |
| R1-5660.2-exp           | 5'-ACAAGTCGACGTGCCGGTCAGGATTCGT-3'              | <i>Sall</i>   |
| F1-3HA                  | 5'-TTGACCATGGGTCGACGCTAGCTACCCATACGATGTT-3'     | <i>Sall</i>   |

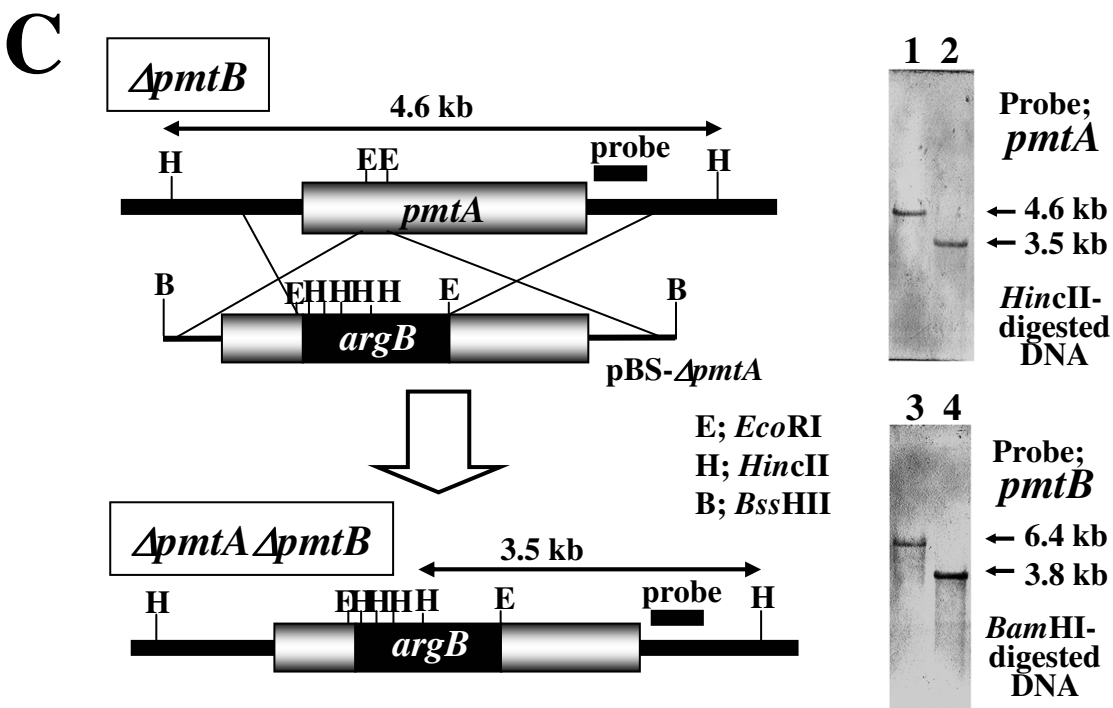
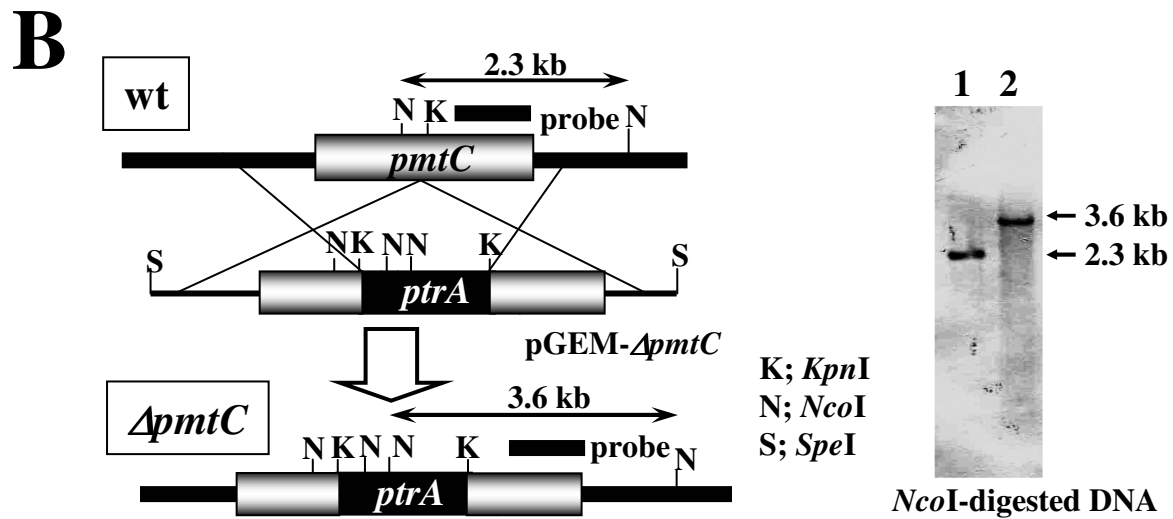
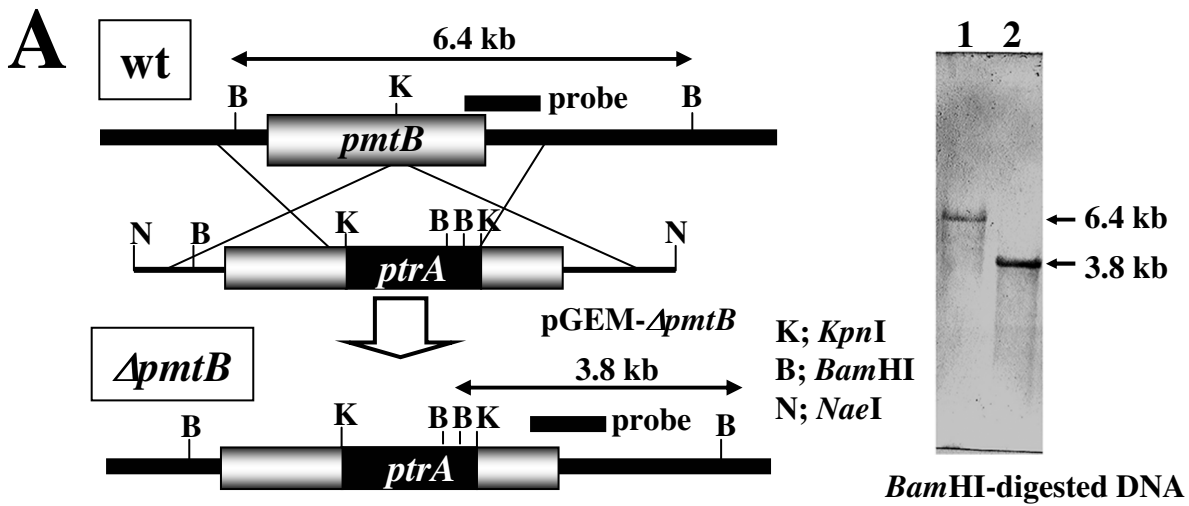
|             |   |              |
|-------------|---|--------------|
| R1-3HA      | 5'-GATTCTGCAGCTAAGCGTAATCCGGTACATCGTAT-3' | <i>Pst</i> I |
| NotI-wscA-F | 5'-AAAAGCGGCCGCATGAGGTCGTTACAG-3'         | <i>Not</i> I |
| BglII-3HA-R | 5'-AAAAAGATCTCTAAGCGTAATCCGG-3'           | <i>Bg</i> II |

1 I, Y, W, R, and N indicates Inosine, C or T, A or T, A or G, and A, C, T, or G, respectively.

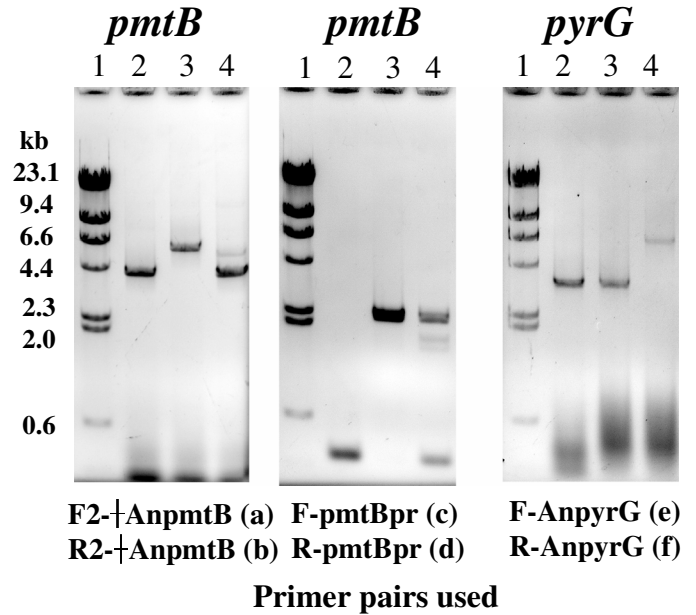
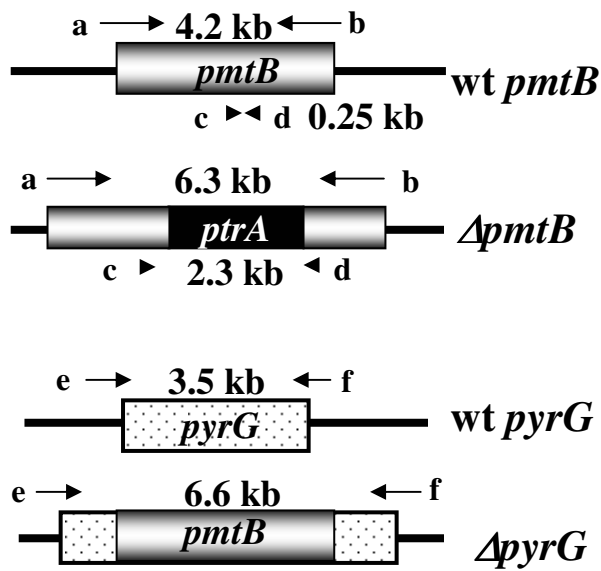
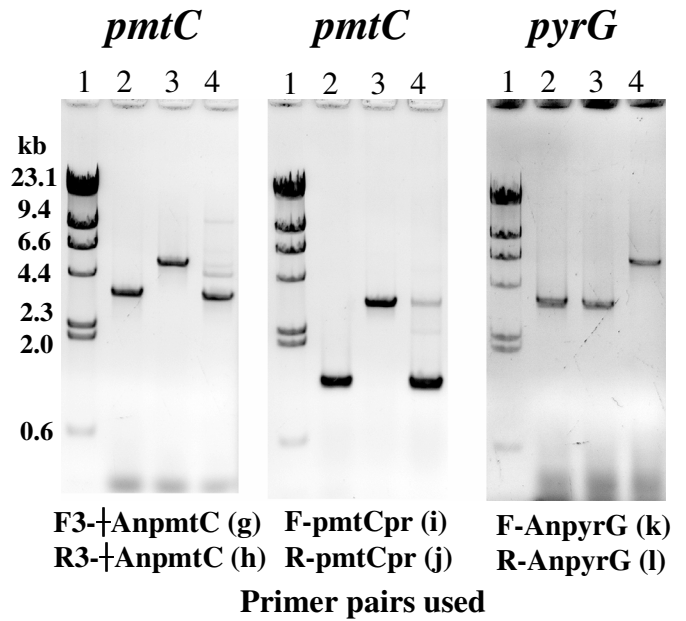
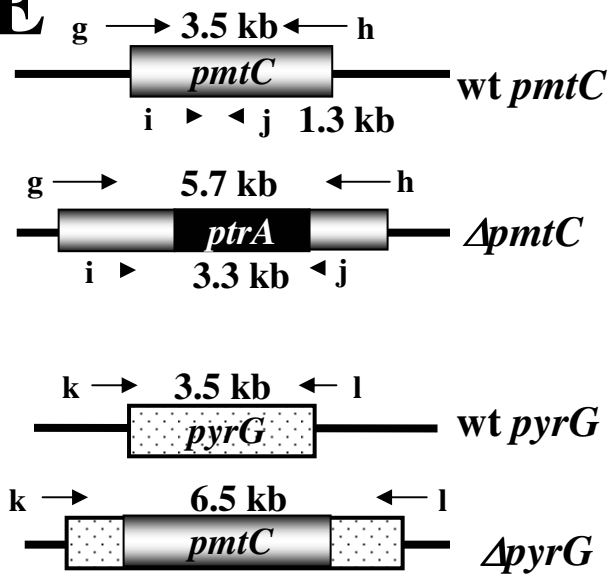
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Supplementary Figure 1. Goto, M. *et al.*



Supplementary Figure 2. Goto, M., *et al.*

**D****E**

Supplementary Figure 2. Goto, M., *et al.*