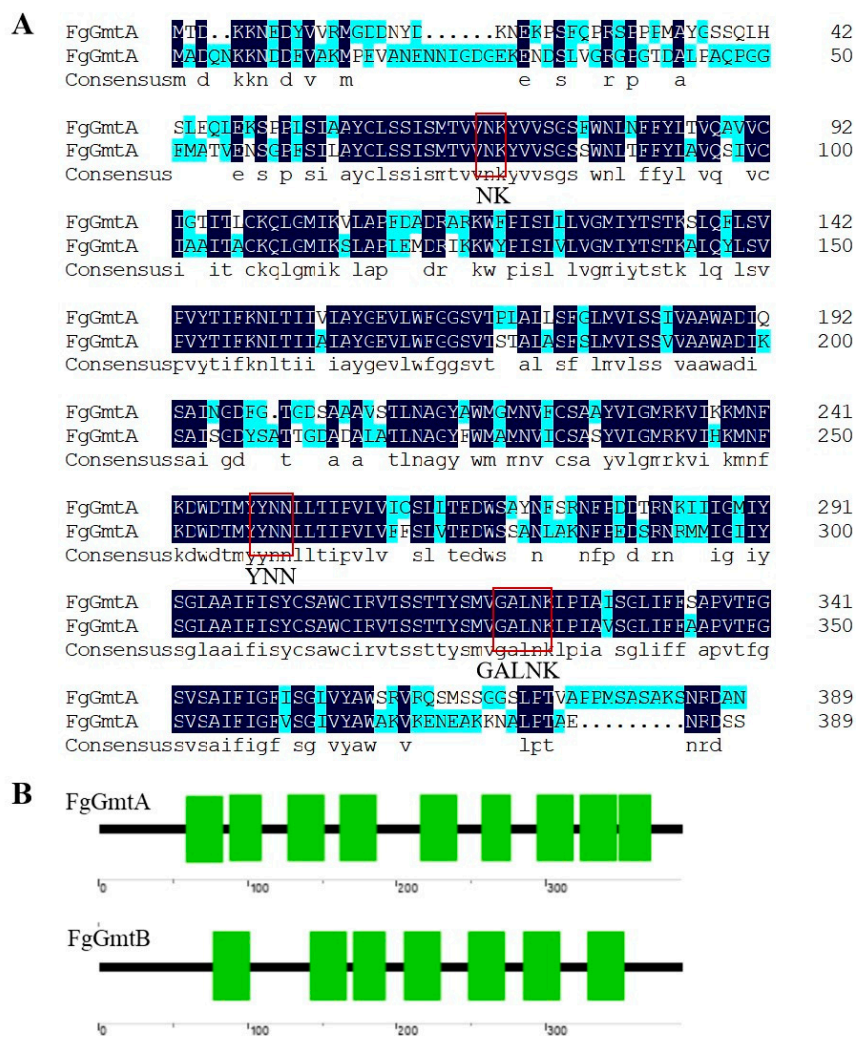


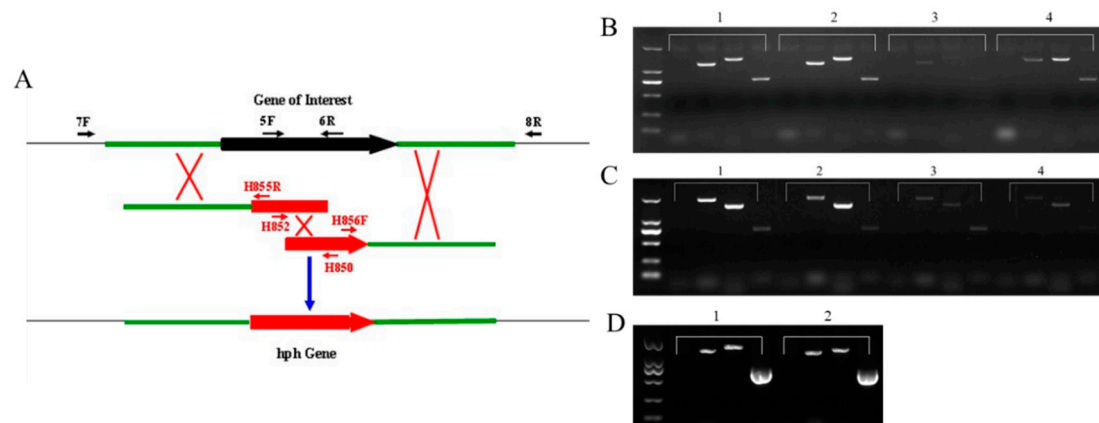
Supplementary Table S1. PCR Primers used in this study

Primer names	Sequence (5'-3')
FgGmtA-1F	CATCATTCACGCTACACTGCC
FgGmtA-2R	TTGACCTCCACTAGCTCCAGCCAAGCCTCGGTTTAGCGGAAGAGAGAG
FgGmtA-3F	GAATAGAGTAGATGCCGACCGCGGGTTCATTTGGTAGAGCCTGGTCC
FgGmtA-4R	ACGAAAGCGAAGCCTATCC
FgGmtA-5F	CGGCTCAAGTCAACTCCAC
FgGmtA-6R	CTTGTTGCGTGTATCGTCAG
FgGmtA-7F	CATGAGAACTGTCTTGGCGC
FgGmtA-8R	ACTCGATGGGTCGTTGACTG
FgGmtB-1F	TTGGTCCTCCCAGTAGTAATCG
FgGmtB-2R	TTGACCTCCACTAGCTCCAGCCAAGCCTTGTAAGAGAGTGGACGAACGG
FgGmtB-3F	GAATAGAGTAGATGCCGACCGCGGGTTGCCAATCTTTCCTCCTAGCC
FgGmtB-4R	GCTGGCGTCAAGGATGTG
FgGmtB-5F	GCATGATCAAGTCCCTTGC
FgGmtB-6R	GACGAAACCAATAAAGATAGCTG
FgGmtB-7F	CCACATGAAAGCAATATCAGG
FgGmtB-8R	GTTAAGTGAACCCATGCGAC
HYG/F	GGCTTGGCTGGAGCTAGTGGAGGTCAA
HY/R	GTATTGACCGATTCTTGCGGTCCGAA
YG/F	GATGTAGGAGGGCGTGGATATGTCCT
HYG/R	AACCCGCGGTGCGCATCTACTCTATTC
H852	TTCCTCCCTTTATTTTCAGATTCAA
H850	ATGTTGGCGACCTCGTATTGG
H855R	GCTGATCTGACCAGTTGC
H855F	GTCGATGCGACGCAATCGT
FgGmtA-NEO/1F	CATCATTCACGCTACACTGCC
FgGmtA-NEO/2R	GTAAGCGTTAATCTAGAGCGTCGGTTTAGCGGAAGAGAGAG
FgGmtA-NEO/3F	TGGGTAAACGACTCATAGGAGCATTTGGTAGAGCCTGGTCC
FgGmtA-NEO/4R	ACGAAAGCGAAGCCTATCC
NEO-1F	CGCTCTAGATTAACGCTTAC
NEO-2R	CCTGATGTTCTTCGTCCA
NEO-3F	GACAATCGGCTGCTCTGA
NEO-4R	CTCCTATGAGTCGTTTACCCA
N852-F	TCGGCTATGACTGGGCACAACA

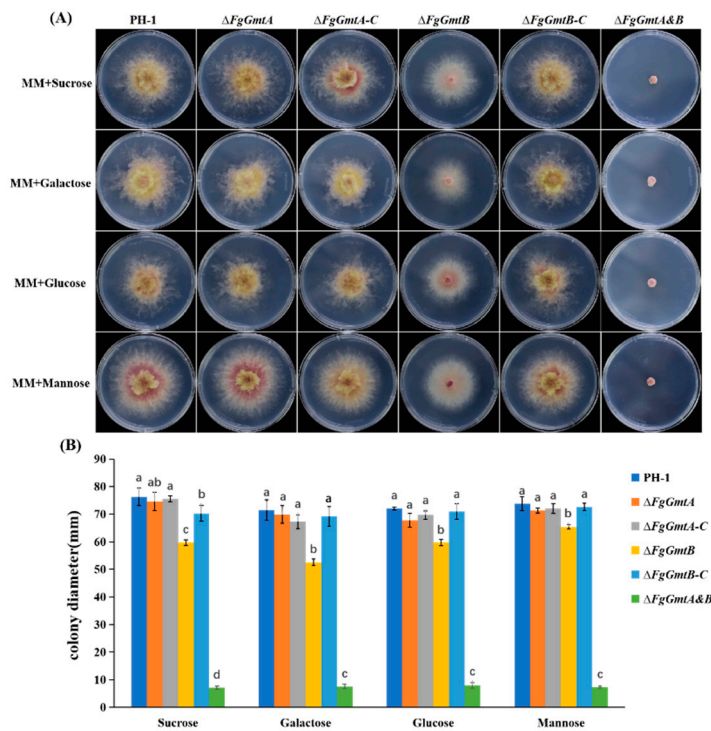
N852-R	GAGCGGCGATACCGTAAAGCAC
N855-F	GAATGGTCAAATCAAACCTGCTAGATAT
N856-R	TTGACTGGCACTGCTGGG
T6-QF	CCCTCAGTCAGCTCAAGACC
T6-QR	CACCCTGCTAAAGACCCTCA
T10-QF	GCTCCCAAATCTTGAAGCTG
T10-QR	AGCGTCTTCCAAGACCTGAA
T12-QF	CATCAGCCTCTGCTCTTCCCA
T12-QR	GTCGCCCAAATCTATCCGTAA
T101-QF	GCCTTCGTTCAGAACTCGAC
T101-QR	CCCAAAGTCGTAATCCCAGA
CHS7-QF	TCGTTATCTCACCACCCTGA
CHS7-QR	AAACACAACGAAGCGCATAC
AbaA-QF	ACTCAGGAAGCTTTGACCACGGC
AbaA-QR	GGGCTCTGGTAGGGGTTGACAGTA
WetA-QF	GTTCCAGGTACTCCCCTGCCAT
WetA-QR	ACGTTCTCGTCGCGCTTTGGT
Mat1-QF	TTCGGTCCTGATTACGATGCC
Mat1-QR	CCAAGCGCTGGTGATCTCCATG
Mat2-QF	AATCACCCAGGCACTCGACGT
Mat2-QR	GCGTGAACGGCTGTGGACAT
mat3-QF	ATCAATCTACTCCAGCGACG
Mat3-QR	ACGCCAGTAAGCCTGTGTCTC
Mat4-QF	AACGCTTACATCCTCTACCG
Mat4-QR	CCTGAGCGCTAGACACGTGAGG
pYES2-FgGmtB-F	GATGCGGCCCTCTAGAATGGCCGACCAGAACAAGAAG
pYES2-FgGmtA-R	TACCGAGCTCGGATCCCTTTGACGAATCTCGGTTCTCG
pYES2-FgGmtA-F	GATGCGGCCCTCTAGAATGACCGATAAGAAGAACGAGG
pYES2-FgGmtA-R	TACCGAGCTCGGATCCAGAGTTGGCATCACGGTTGC
FgGmtA-CF	AGGGAACAAAAGCTGGGTACCGGCGTACTTACGATGTCCAGATC
FgGmtA-CR	GAACAGCTCCTCGCCCTTGCTCACAGAGTTGGCATCACGGTTGC
FgGmtB-CR	AGGGAACAAAAGCTGGGTACCGTTGCCAAAGTTGTCCATGAGC
FgGmtB-CR	GAACAGCTCCTCGCCCTTGCTCACCTTTGACGAATCTCGGTTCTCG



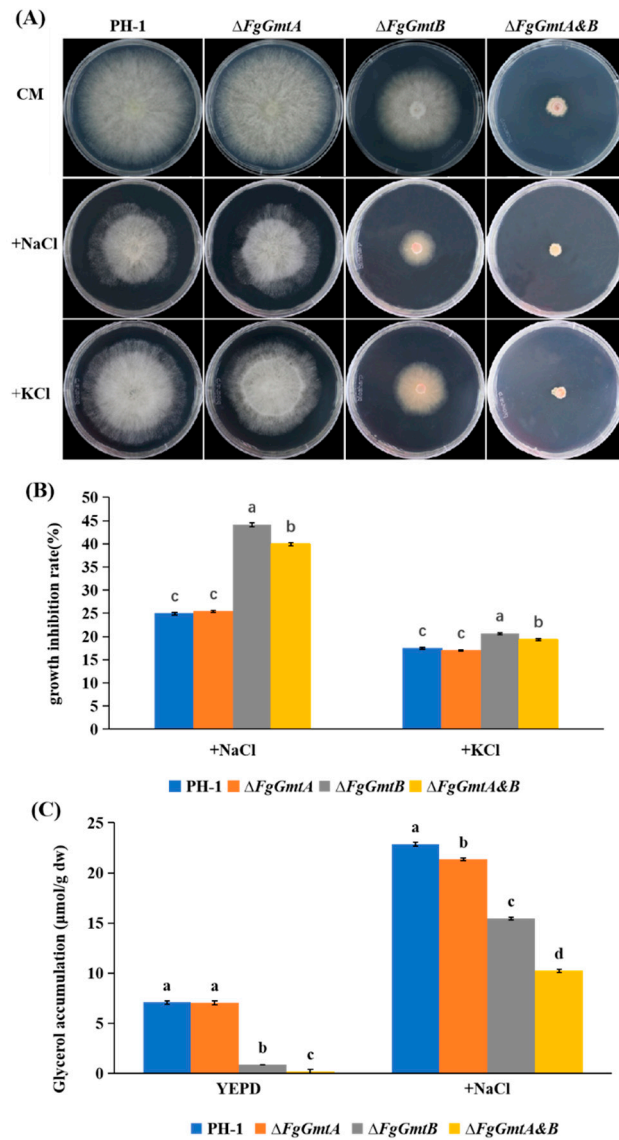
Supplementary Figure S1. Structural analysis of FgGmts of *F. graminearum*. (A) Multiple sequence alignments of *FgGmtA*, and *FgGmtB* were built with DNAMAN 6.0 software (Lynnon Biosoft, Foster City, CA, USA), and three conserved motifs (NK, YNN and GX(L/V)NK) are marked in a box. (B) Transmembrane structure of *FgGmts*.



Supplementary Figure S2. Knockout strategy and validation of *FgGmtA* and *FgGmtB*. (A) Schematic of homologous recombination-based gene knockout and four-pair primer PCR detection of transformants. (B) Detection of *FgGmtA* knockout transformants. (C) Detection of *FgGmtB* gene knockout transformants. (D) Detection of *FgGmtA&B* gene knockout transformants.



Supplementary Figure S3. Determination of the utilization of four carbon sources by *FgGmtA/B* in MM medium. (A) The growth of wild-type PH-1, $\Delta FgGmtA$, $\Delta FgGmtB$ and $\Delta FgGmtA\&B$ strain complemented strain on MM medium containing different carbon sources. (B) the colony diameter of the strain after 3 days of growth on the MM plate. Values on bars followed by different letters statistically different at $p < 0.05$.



Supplementary Figure S4. Determination of *FgGmtA/B* sensitivity to osmotic stress and corresponding glycerol concentration. (A) Colonies of wild-type PH-1, $\Delta FgGmtA$, $\Delta FgGmtB$, $\Delta FgGmtA\&B$, PH-1 mutant strains on PDA media supplemented with or without 1.2 mol/L NaCl and 1.2 mol/L KCl. (B) Growth inhibition rate of each strain after incubation at 25 °C for 3 days, calculated from 3 independent experiments. (C) Intracellular glycerol accumulation in cells treated for 2 hours with or without 1.2 mol/L NaCl. Values on bars followed by different letters statistically different at $p < 0.05$.