

Figure S5

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Consensus  MAS.LGTSSI  AVLPSR..SS  .SSKPSIHTL  SLTSGQ.YGR  KFYGGIGIHG  50
Gma Chl1a  ...A.....  .....YF..  S.....  .....N...  .....
Gma Chl1b  ...T.....  .....CI..  F.....  .....S...  .....

Consensus  IKGR.QLSV.  NVATEVNSVE  QAQSIASKES  QRPVYPFSAI  VGQDEMKLCL  100
Gma Chl1a  ....A....T  .....  .....  .....  .....
Gma Chl1b  ....S....A  .....  .....  .....  .....

Consensus  LLNVIDPKIG  GVMIMGDRGT  GKSTTVRSLV  DLLPEIKVVA  GDPYNSDPQD  150
Gma Chl1a  .....  .....  .....  .....  .....
Gma Chl1b  .....  .....  .....  .....  .....

Consensus  PEFMGVEVRE  RVLQGEELSV  VLTKINMVDL  PLGATEDRVC  GTIDIEKALT  200
Gma Chl1a  .....  .....  .....  .....  .....
Gma Chl1b  .....  .....  .....  .....  .....

Consensus  EGVKAFEPGL  LAKANRGILY  VDEVNLLDDH  LVDVLLDSAA  SGWNTVEREG  250
Gma Chl1a  .....  .....  .....  .....  .....
Gma Chl1b  .....  .....  .....  .....  .....

Consensus  ISISHPARFI  LIGSGNPEEG  ELRPOLLDRF  GMHAQVGTVR  DAELRVKIVE  300
Gma Chl1a  .....  .....  .....  .....  .....
Gma Chl1b  .....  .....  .....  .....  .....

Consensus  ERGRFDKNPK  EFRDSYKAEQ  EKLQQQITSA  RSVLSSVQID  QDLKVKISKV  350
Gma Chl1a  .....  .....  .....  .....  .....
Gma Chl1b  .....  .....  .....  .....  .....

Consensus  CAELNVDGLR  GDIVTNRAAK  ALAALK.RD.  VSAEDIATVI  PNCLRHLRLK  400
Gma Chl1a  .....  .....  .....G..N  .....  .....
Gma Chl1b  .....  .....  .....E..K  .....  .....

Consensus  DPLESIDSGL  LVTEKFYEVF  S 421
Gma Chl1a  .....  .....  .
Gma Chl1b  .....  .....  .

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**Figure S5** Amino acid sequence comparison of Chl1a (Glyma13g30560) to Chl1b (Glyma15g08680) showing the high degree of similarity between the two Mg-chelatase subunits. The two boxed residues indicate the positions of the  $\gamma$ 11-2 (R273Q) mutation and  $\gamma$ 11 and CD-5 (Q275R) mutations.