

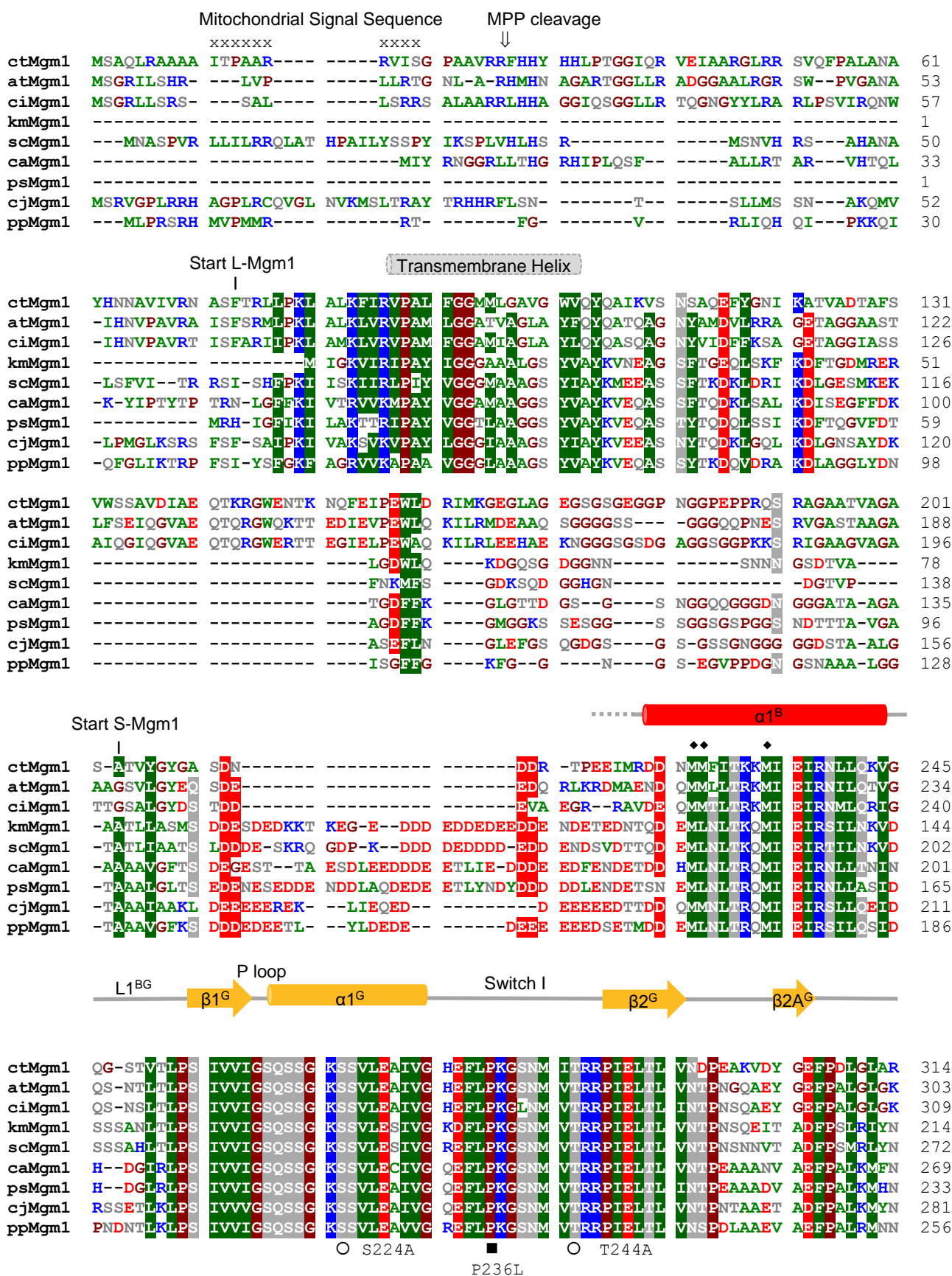
In the format provided by the authors and unedited.

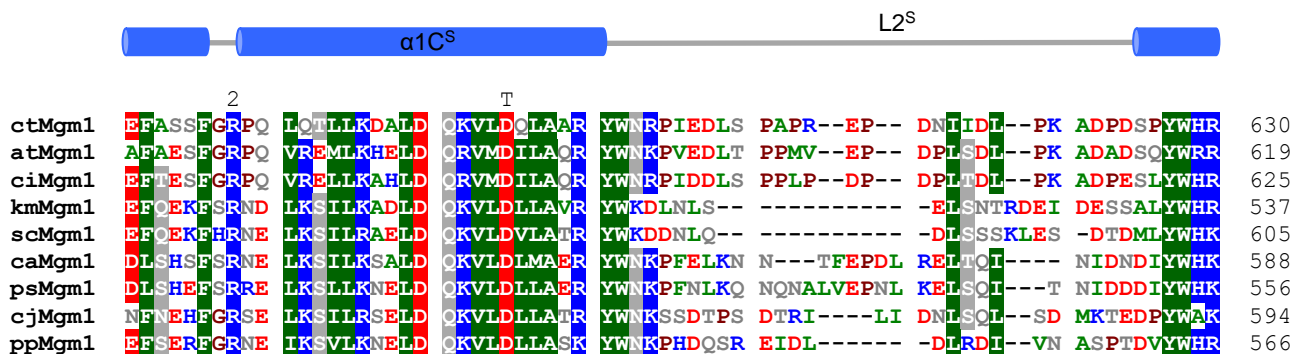
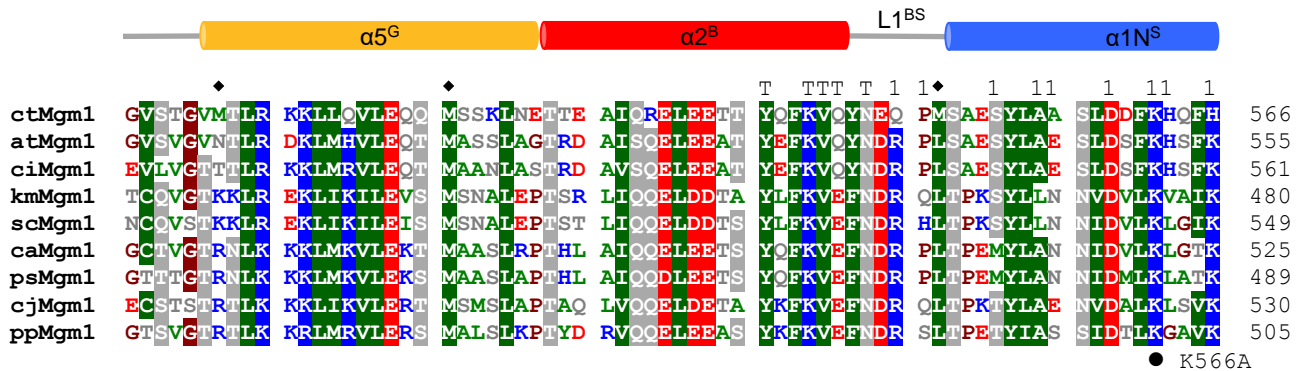
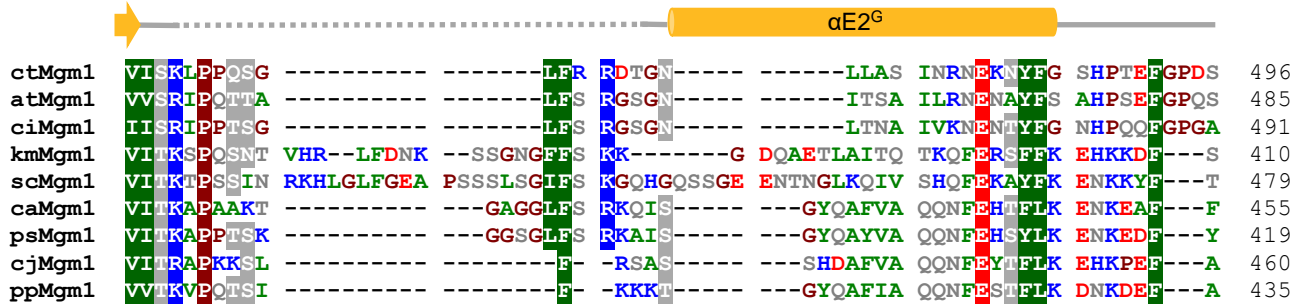
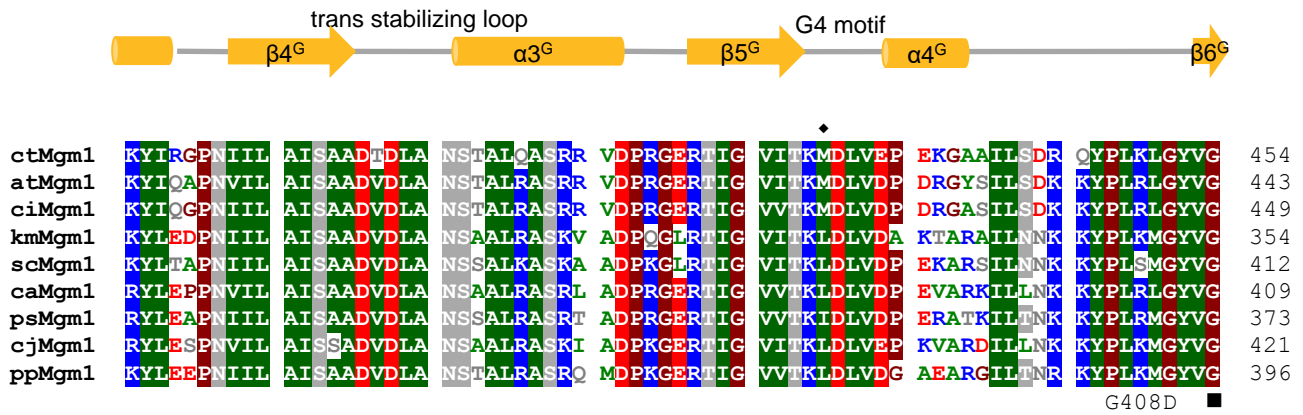
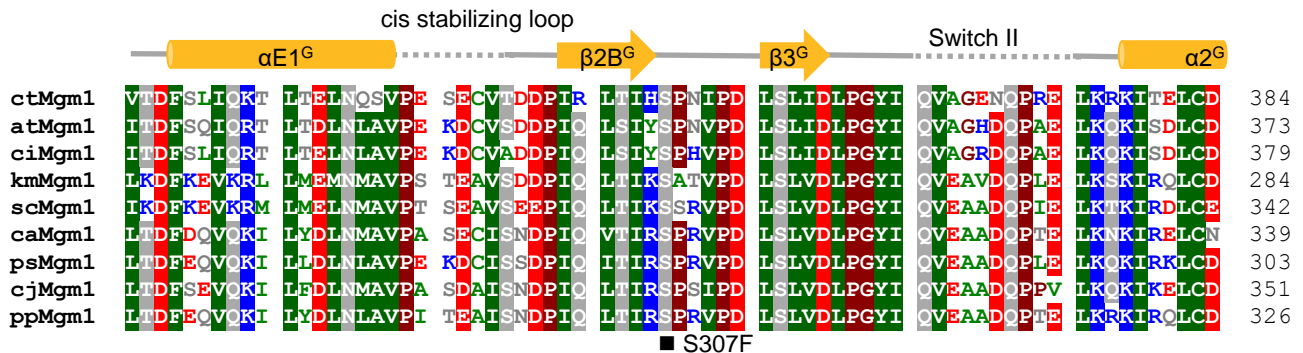
Structure and assembly of the mitochondrial membrane remodelling GTPase Mgm1

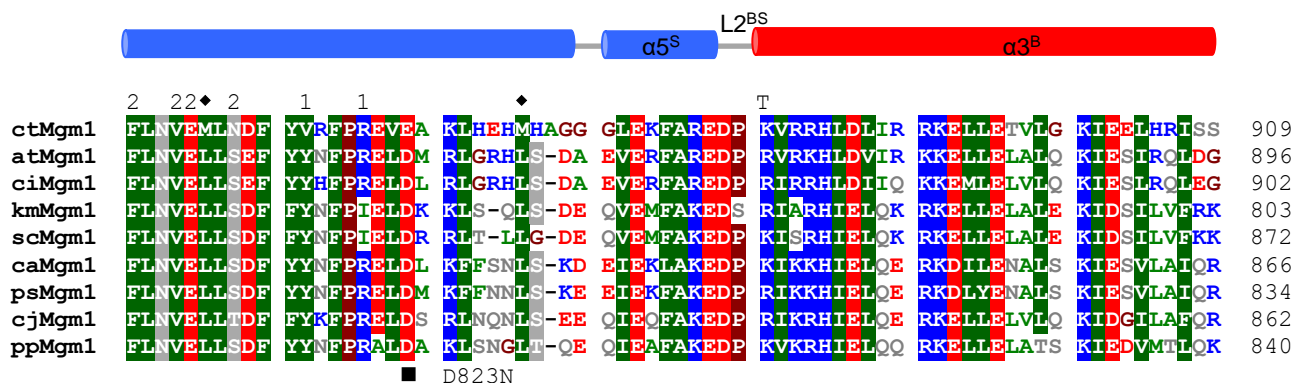
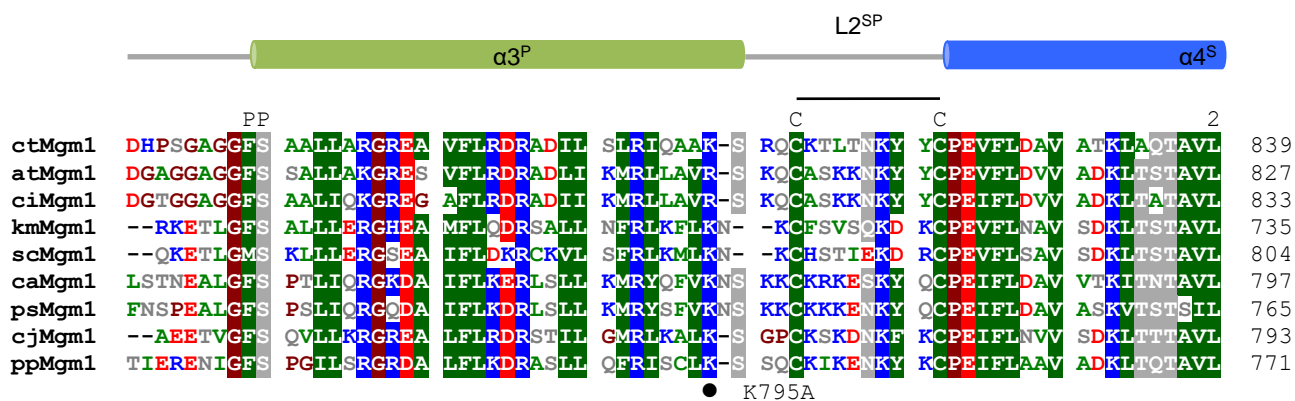
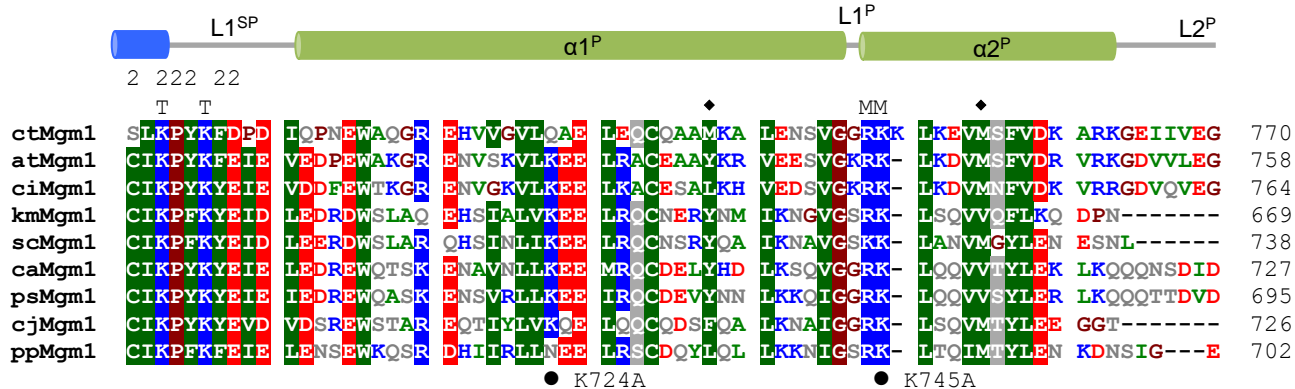
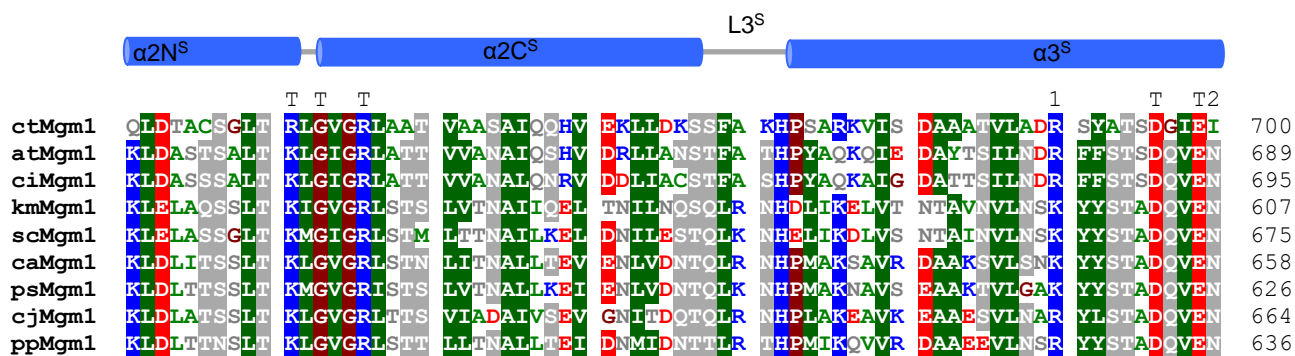
Katja Faelber^{1,10*}, Lea Dietrich^{2,10}, Jeffrey K. Noel¹, Florian Wollweber³, Anna-Katharina Pfitzner⁴, Alexander Mühleip², Ricardo Sánchez⁵, Misha Kudryashev⁵, Nicolas Chiaruttini⁴, Hauke Lilie⁶, Jeanette Schlegel¹, Eva Rosenbaum¹, Manuel Hessenberger¹, Claudia Matthaeus¹, Séverine Kunz⁷, Alexander von der Malsburg³, Frank Noé⁸, Aurélien Roux⁴, Martin van der Laan³, Werner Kühlbrandt^{2*} & Oliver Daumke^{1,9*}

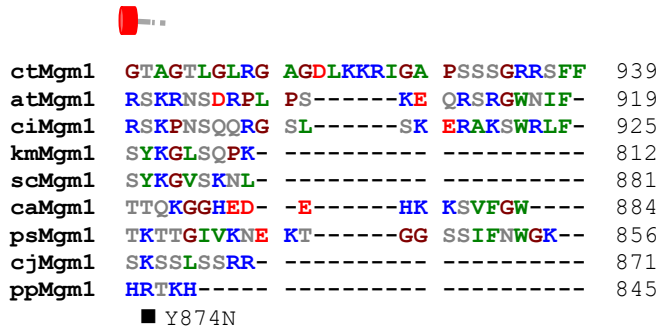
¹Crystallography, Max-Delbrück-Centrum for Molecular Medicine, Berlin, Germany. ²Department of Structural Biology, Max Planck Institute of Biophysics, Frankfurt am Main, Germany. ³Medical Biochemistry & Molecular Biology, Center for Molecular Signaling, PZMS, Saarland University Medical School, Homburg, Germany. ⁴Biochemistry Department, University of Geneva, Geneva, Switzerland. ⁵Alexander von Humboldt - Sofja Kovalevskaja Research Group, Max Planck Institute of Biophysics, Frankfurt am Main, Germany. ⁶Institute of Biochemistry and Biotechnology, Section of Protein Biochemistry, Martin Luther University Halle-Wittenberg, Halle (Saale), Germany. ⁷EM facility, Max-Delbrück-Centrum for Molecular Medicine, Berlin, Germany. ⁸Institute for Mathematics, Freie Universität Berlin, Berlin, Germany. ⁹Institute of Chemistry and Biochemistry, Freie Universität Berlin, Berlin, Germany. ¹⁰These authors contributed equally: Katja Faelber, Lea Dietrich. *e-mail: katja.faelber@mdc-berlin.de; werner.kuehlbrandt@biophys.mpg.de; oliver.daumke@mdc-berlin.de

Supplementary Figure 1: Sequence alignment of Mgm1 proteins.









Supplementary Figure 1: Sequence alignment of Mgm1 proteins.

The following sequences were aligned: *Chaetomium thermophilum* (ctMgm1, Uniprot accession number G0SGC7), *Aspergillus terreus* (atMgm1, Q0D0Y9), *Coccidioides immitis* (ciMgm1, J3K1G3), *Kluyveromyces marxianus* (kmMgm1, W0T8X7), *Saccharomyces cerevisiae* (scMgm1, P32266), *Candida tropicalis* (caMgm1, C5M2J4), *Pichia stipites* (psMgm1, A3GGI6), *Pichia jadinii* (cjMgm1, A0A0H5C253), *Komagataella phaffii* / *Pichia pastoris* (ppMgm1, F2QTP9). Amino acids are colour-coded (negative charge D, E: red, positive charge R, K, H: blue, hydrophobic L, I, V, F, Y, W, M, C: gray, P, G: brown) and highlighted if conserved more than 70%. Interface residues with contributions of more than 20 Å² are labelled above the alignment (T for tetramer interface, 1,2 for stalk interfaces-1 and 2, respectively). ♦ indicate methionine residues with signal in the anomalous density. The position of temperature-sensitive (■) alleles and nucleotide-binding deficient mutants (○) in *Schizosaccharomyces pombe* Mgm1p according to Wong & Nunnari 2003 and Meussen & Nunnari, 2006 are indicated, as well as membrane-binding deficient mutants in *Saccharomyces cerevisiae* according to Meglei & McQuibban, 2009 (●). L-Mgm1, S-Mgm1 – long and short isoform of Mgm1, MPP – mitochondrial processing peptidase, C-indicates the disulphide bond.