Gpm2p and Gpm3p were originally identified as homologs of Gpm1p, a phosphoglycerate mutase involved in glycolysis. They share 65% identity with each other and 43% identity with Gpm1p. Gpm2p and Gpm3p each contain a conserved 'LLRHGQSELN' motif, a signature sequence of the phosphoglycerate mutase family. In addition, residues of Gpm1p shown to be involved in catalysisare conserved in Gpm2p and Gpm3p. Despite this homology, neither gene complements a gpm1 deletion in strain VW1A when overexpressed on high copy number plasmids under the control of their weak endogenous promoters. However, GPM2 and GPM3 partially restore activity and growth to a gpm1 deletion mutant when overexpressed from the yeast PFK1 promoter. By following the intermediary metabolites preceding and succeeding the GPM reaction, it has been demonstrated that neither the gpm2 nor the gpm3 deletion mutation affects glycolysis, nor does it confer any obvious phenotype. It has been proposed that GPM2 and GPM3 may be non-functional homologues of GPM1 that were generated by a gene duplication event and then diverged from the parent copy by mutation.