During N-linked glycosylation of proteins, oligosaccharide chains are assembled on the carrier molecule dolichyl pyrophosphate in the following order: 2 molecules of N-acetylglucosamine, 9 molecules of mannose, and 3 molecules of glucose. These 14-residue oligosaccharide cores are then transferred to asparagine residues on nascent polypeptide chains in the endoplasmic reticulum. As proteins progress through the Golgi apparatus, the oligosaccharide cores are modified by trimming and extension to generate a diverse array of glycosylated proteins. ALG12 is an alpha 1,6 mannosyltransferase that catalyzes the addition of the eighth mannose moiety in the lumen of the endoplasmic reticulum. The seventh and ninth mannoses are both added by Alg9p. Mutants accumulate lipid-linked oligosaccharideswith seven mannose moieties. Human ALG12complements deletion of yeast ALG12and has been found to be mutated in the congenital disorder of glycosylation CDG-1g.