Pex11p, Pex25p, and Pex27p comprise a family of proteins whose members are required for peroxisome biogenesis and play a role in the regulation of peroxisome size and number. Pex25p and Pex27p are peroxisomal membrane proteins whose C-termini are similar to the entire Pex11p. Deletion of PEX25 or PEX27 results in enlarged peroxisomes. A partial growth defect on fatty acids of a pex25delta mutant is not exacerbated by the additional deletion of PEX27; however, when PEX11 is also deleted, growth is abolished on all fatty acids. Moreover, the triple mutant strain exhibits a severe peroxisomal protein import defect. Overexpression of PEX27 or PEX25 leads to peroxisome proliferation and the formation of small peroxisomes. Overexpression of PEX11 has been reported to produce this same small-peroxisome phenotype, and also a similar phenotype in which cells contain an increased number of normal-sized peroxisomes.