STE6 was first identified as a gene necessary for mating in MAT a cells. The Ste6 protein is a membrane transporter of the ABCfamily. While alpha factor is exported in MATalpha cells via the classical secretion pathway, a-factor is pumped out of the cell by the MATa cell-specific protein Ste6p. In MATalpha cells, STE6 expression is repressed by the Alpha2 gene product. Ste6p is related to human MDR1, a P-glycoprotein/multiple drug resistance protein; several MDR proteins, including mouse Mdr3 and cystic fibrosis transmembrane conductance regulator/Ste6 chimeras, can complement ste6 null mutations in vivo in yeast. In fact, a model has been established by these cross-species complementation tests to study the function of higher eukaryotic MDR proteins.