

INSERTION MEDIATED PUSHING-OVER FOR APOCYTOCHROME c MEMBRANE TRANSLOCATION

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Nuclear gene-encoded cytochrome c, having no removable presequence at N-terminal is imported into mitochondria along a unique pathway. Two import determinants were believed in N-terminal and 55-90 near C-terminal, in present study the C-terminal determinant was precisely mapped to 68-88 region by fragment deletion and synthetic peptide competition. C68-88 is a minimal requirement for independent insert into acidic phospholipid containing membrane, its insertion activity was enhanced by interaction with N19, which is not able to insert into membrane itself. The inhibitory effect of C68-88 was also enhanced by N19 while N19 itself didn't. Based on above results a insertion mediated pushing-over model for apocytochrome c membrane translocation was proposed.