

CLONING AND SEQUENCING OF AN ALTERNATIVE NADH DEHYDROGENASE FROM *ASPERGILLUS FUMIGATUS*

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Aspergillus fumigatus is a saprophytic fungus in the environment that has been found spread around the world and has become one of the main pathogen agents, especially among immunosuppressing patients. Previously studies in our laboratory indicated the presence of an alternative NADH dehydrogenase (NDH) in *A. fumigatus*. The precise physiological role of this enzyme is still unclear. With the propose to elucidate the role of this enzyme, we have cloned and sequence the genomic DNA and cDNA of alternative NDH from *A. fumigatus*, which contain 1,974 and 1,743 nucleotides respectively. The alignment of these sequences revealed three introns that after *splicing*, encode a protein of 581 amino acids with a calculated molecular mass of 65.74 kDa and *pI* 9.31. The hydropathy analysis of the deduced amino acid sequence revealed a profile similar to others alternative NADH dehydrogenase containing four transmembrane domains. This amino acid sequence revealed two highly conserved glycine-rich (GXGXXG) motifs in predicted $\beta\alpha\beta$ domains, which are related with the structure and role of this enzyme.

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