ABSTRACT

A gene sequence of recombinant human type II mitochondrial dynein-like GTPase having a nucleotide sequence shown in SEQ ID NO.: 1 and uses thereof. A fusion nucleic acid comprising a nucleic acid encoding human type II mitochondrial dynein-like GTPase. A recombinant expression vector comprising the nucleic acid or a fusion nucleic acid. A transformant by which the nucleic acid or the fusion nucleic acid is introduced into a host. A non-human mammalian ADOA model based on the inactivation of the gene of type II mitochondrial dynein-like GTPase, which can effectively improve the pathological manifestations of ADOA using a recombinant expression vector encoding the human type II mitochondrial dynein-like GTPase. The expression level of the nucleic acid encoding the human type II mitochondrial dynein-like GTPase is higher, therefore, more human type II mitochondrial dynein-like GTPase can be obtained in the mitochondria, which can better treat eye diseases such as ADOA.