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UNRAVELING MINK HAIR KERATIN GENES

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Abstract

Mink for luxurious fur face a high risk of global extinction, with species like the European mink designated as critically endangered by the IUCN red list. Recent whole-genome sequencing efforts have unveiled mink hair genes. Analyzing type I and II hair keratin genes from the GenBank database, a major hair protein KRT81 in Mink is consisted of 519 amino acids with an approximate molecular weight of 56.3kD and an isoelectric point of 5.5. Phylogentic analysis of basic type II hair keratins and acidic type I hair keratins in mink and human identifies the counterpart of the hair keratin filaments and possible combinations to form mink fur shedding light on fur biosynthesis mechanisms as well as aiding the design of transgenic animals producing mink fur to help save the species.