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## タイトル

Analysis of mitochondrial localizing mRNA

## 概要

Many mRNAs encoding mitochondrial proteins are translated on the free cytosolic polysome. Some mRNAs were found exclusively to localize to mitochondrion-bound polysomes, presumably to facilitate protein transport. The 3'-untranslated region (UTR) were shown to be important for targeting to the mitochondria. The primary and the secondary structural targeting signals were localized by using the UTR 150bp downstream of the stop codon. Recent global RNA sequencing analysis (Nagarakshmi et al. 2008) provided a large data set of experimentally-verified 3'-UTRs. So we extracted the 3'-UTR from this RNA sequencing data and searched the primary motif. Our motif search was revealed that the coverage of this signal was less than 10%. Furthermore, the mRNA-encoding ATP2 is localized to the mitochondrion-bound polysome even though it does not include either the primary nor the secondary structural signals in the experimentally-verified 3'-UTR. To find novel signals in the 3'-UTR, we are comparing the 3'-UTR of MLRs with that of non-MLRs by using the new 3'-UTR data.