

## Mitochondrial DNA Isolation Kit

**Cat. No.** Kit-0559    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Mitochondrial DNA Isolation Kit is used for isolating mtDNA from a variety of cells and tissues.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | Mitochondria are semiautonomous organelles which functions in aging process, apoptosis, anti-HIV drugs, and cancers. Mitochondrial DNA (mtDNA) has a very high mutation rate and the mutations on mtDNA appear to be related to certain diseases such as diabetes, Alzheimer's disease, and muscle disorders. Isolation and quantification of mtDNA are often required to study the relationships between the diseases and mtDNA. The Mitochondrial DNA Isolation Kit provides convenient tools for isolating mtDNA from a variety of cells and tissues in high yield and purity, without contaminations from genomic DNA. The purified mtDNA can be used for a variety of studies such as enzyme manipulations, Southern blotting, cloning, PCR analysis, and amplifications. |
| <b>Target Species</b>   | Mammals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Usage</b>            | For research use only (RUO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Storage</b>          | Read the entire protocol before beginning the procedure. After opening the kit, store Enzyme B Mix at -70°C. Store all other Buffers at 4°C. Make 1X Cytosolic Extraction Buffer by mixing 1 mL of the 5X buffer with 4 mL ddH <sub>2</sub> O. Add 275 µL of TE buffer to Enzyme B Mix, mix well, aliquot and refreeze immediately at -70°C. Stable for up to 3 months at -70°C. Be sure to keep all buffers on ice at all times during the experiment.                                                                                                                                                                                                                                                                                                                        |

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Kit Components</b>          | 5X Cytosol Extraction Buffer 20 mL<br>Mitochondrial Lysis Buffer 1.8 mL<br>Enzyme B Mix (lyophilized) 1 vial<br>TE Buffer 1.5 mL |
| <b>Compatible Sample Types</b> | Cell, Tissue                                                                                                                     |

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