

Human NADH dehydrogenase ELISA Kit (Complex I) ab178011

SimpleStep ELISA

7 References 画像数 5

製品の概要

| | | | | | |
|---------------------|---|------|-----|-------------|------|
| 製品名 | Human NADH dehydrogenase ELISA Kit (Complex I) | | | | |
| 検出方法 | Colorimetric | | | | |
| 再現性 | Intra-Assay (同時再現性) | | | | |
| サンプル | | N | 平均値 | SD | CV% |
| HepG2 lysate | | 5 | | | 2.7% |
| | | | | | |
| Inter-Assay (日差再現性) | | | | | |
| サンプル | | N | 平均値 | SD | CV% |
| HepG2 lysate | | 3 | | | 5.9% |
| | | | | | |
| サンプルの種類 | Cell culture extracts, Tissue Extracts | | | | |
| アッセイタイプ | Sandwich (quantitative) | | | | |
| 検出感度 | 430 ng/ml | | | | |
| 検出範囲 | 3.13 µg/ml - 200 µg/ml | | | | |
| 添加回収試験 | 特定サンプルでの回収試験 | | | | |
| サンプルの種類 | | 平均 % | | 測定範囲 | |
| Serum | | 110 | | 108% - 111% | |
| Cell culture media | | 66 | | 64% - 67% | |
| Fetal Bovine Serum | | 74 | | 70% - 77% | |
| | | | | | |
| 全工程の試験時間 | 1h 30m | | | | |
| ステップ | One step assay | | | | |
| 種交差性 | 交差種: Human | | | | |
| 製品の概要 | Human NADH Dehydrogenase (Complex I) ELISA kit (ab178011) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of NADH Dehydrogenase protein in | | | | |

human cell and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate human NADH Dehydrogenase with 430 ng/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

特記事項

NADH dehydrogenase (NADH: ubiquinone reductase (H⁺-translocating), Complex I) is the first enzyme of the oxidative phosphorylation (OXPHOS) system within the mitochondrial inner membrane. NADH dehydrogenase is a large protein complex of 950,000 MW made up of 45-46 different subunits. Seven of the subunits of the complex are encoded on mitochondrial DNA (mtDNA), the remaining subunits are nuclear encoded, made in the cytosol and translocated into the organelle for assembly at the inner membrane. The enzyme complex catalyses electron entry from NADH via a flavin (FMN) and several non-heme iron centers. Mutations in mtDNA, or nuclear DNA genes encoding NADH dehydrogenase subunits or assembly factors are a common cause of genetic OXPHOS defects. Mutations or loss of mtDNA may cause enzymatic dysfunction by disrupting enzyme assembly or alternatively by specifically affecting enzymatic activity with no effect on enzyme assembly.

NADH dehydrogenase (like Complex III) has been proposed as a site of superoxide 'leak' from the mitochondrial OXPHOS system. Altered functioning and increased superoxide production by this complex has been proposed to contribute to several neurological disorders including Parkinson's disease. Also there is evidence of NADH Dehydrogenase involvement in diabetes.

試験プラットフォーム

Microplate

製品の特性

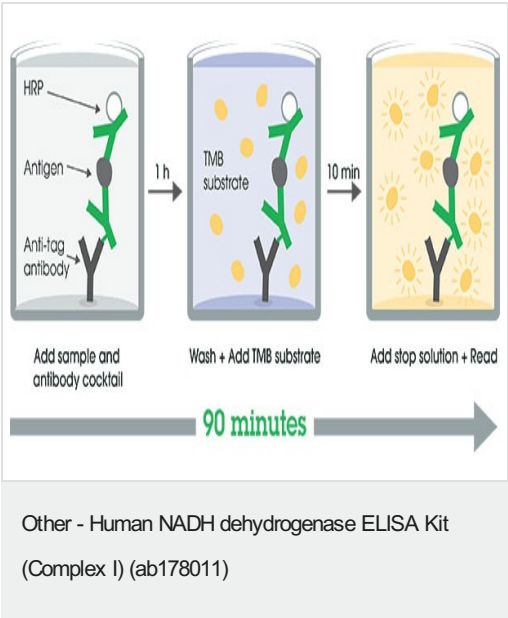
保存方法

Store at +4°C. Please refer to protocols.

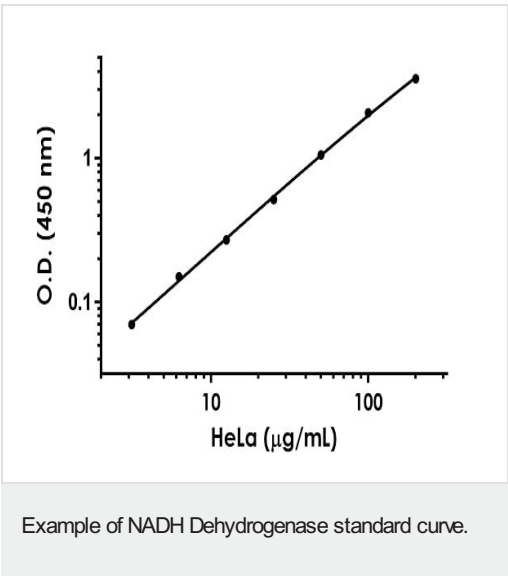
| 内容 | 1 x 96 tests |
|--|--------------|
| 10X Human NADH Dehydrogenase Capture Antibody | 1 x 600µl |
| 10X Human NADH Dehydrogenase Detector Antibody | 1 x 600µl |
| 10X Wash Buffer LM | 1 x 20ml |
| 2X Cell Extraction Buffer LM | 1 x 10ml |
| Antibody Diluent 5B | 1 x 6ml |

| 内容 | 1 x 96 tests |
|---|--------------|
| HeLa Human Lyophilized Protein | 2 vials |
| Plate Seals | 1 unit |
| Sample Diluent NS (ab193972) | 1 x 12ml |
| SimpleStep Pre-Coated 96-Well Microplate (ab206978) | 1 unit |
| Stop Solution | 1 x 12ml |
| TMB Development Solution | 1 x 12ml |

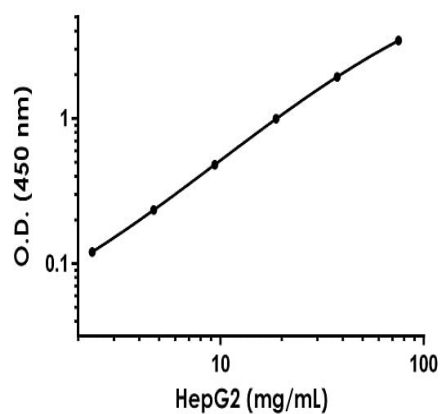
画像



SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

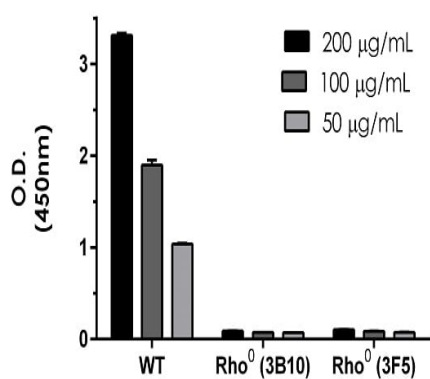


Example of human NADH Dehydrogenase control curve in 1X Cell Extraction Buffer LM. The NADH Dehydrogenase control curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



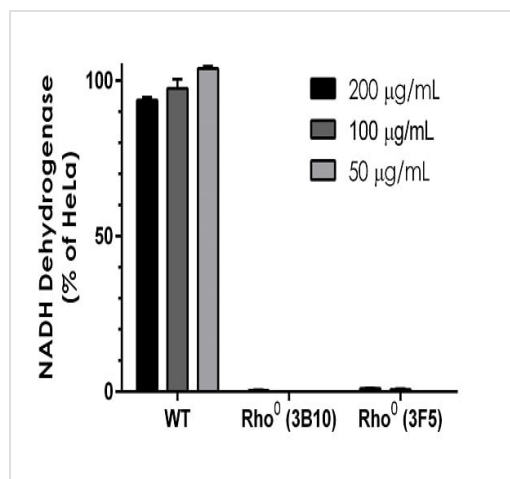
Titration of HepG2 cell lysate within the working range of the assay.

Background-subtracted data values from triplicate measurements (mean \pm SD) are graphed.



Comparison of NADH Dehydrogenase expression in 143B wildtype (WT) and two clones (3B10 and 3F5) of 143B-derived Rho0 (mitochondrial DNA-depleted) cells.

Background-subtracted data values from triplicate measurements of three lysate concentrations (200, 100 and 50 µg/mL) are graphed as mean \pm SD.



Quantification of NADH Dehydrogenase expression in 143B wildtype (WT) and two clones (3B10 and 3F5) of 143B-derived Rho⁰ (mitochondrial DNA-depleted) cells.

Quantification of NADH Dehydrogenase expression in 143B wildtype (WT) and two clones (3B10 and 3F5) of 143B-derived Rho⁰ (mitochondrial DNA-depleted) cells. The concentrations of NADH Dehydrogenase were interpolated from data values shown in Figure 3 using NADH Dehydrogenase control curve of the HeLa Lyophilized Lysate Control, corrected for sample dilution, and graphed in percent relative to NADH Dehydrogenase expression in HeLa cell extract. The concentration of NADH Dehydrogenase in both Rho⁰ cell lines was less than 1% of the concentration in the WT 143B cells.

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