

Protein Carbonyl Assay Kit (Western Blot) ab178020

★★★★★ **2 Abreviews** **50 References** 画像数 2

製品の概要

製品名	Protein Carbonyl Assay Kit (Western Blot)
サンプルの種類	Adherent cells, Suspension cells, Tissue Homogenate
製品の概要	Protein Carbonyl Assay Kit (Western Blot) ab178020 is designed for the measurement of protein carbonyl groups that are created by the oxidation of proteins. This can be through reaction with ozone or oxides of nitrogen, or by metal catalyzed oxidation.

In the protein carbonyl assay protocol, carbonyl groups in protein side chains are derivatized to DNP-hydrazone by reaction with DNPH. The DNP moieties are detected using an anti-DNP antibody and western blotting.

Using an immunoblotting method for the protein carbonyl assay has the advantage that individual oxidized proteins are separated and identified from a complex mixture by SDS-PAGE. The oxidative status of each protein can be compared between samples.

Protein carbonyl assay protocol summary:

- extract proteins from samples with extraction buffer, 20 min incubation, centrifugation at 18,000 x g for 20 min, and retention of the supernatant
- denature proteins with SDS solution
- incubate with DNPH for 15 min
- add neutralization solution
- run samples on polyacrylamide gel
- transfer proteins to membrane
- block for 1 hr
- incubate with DNP antibody for 3 hr, and wash
- incubate with HRP goat anti-rabbit secondary antibody for 1 hr, and wash
- develop with ECL and acquire image

特記事項

Previously called Oxidized Protein Assay Kit (Western blot).

Oxygen-derived free radicals have been implicated in important roles in aging, apoptosis, and cancer. These highly reactive chemical species are also involved in a wide variety of clinical disorders, such as atherosclerosis, cataractogenesis, neurodegenerative diseases, chronic inflammatory diseases, pulmonary diseases and cardiovascular diseases.

Related products

Other Protein Carbonyl Content assays include:

- **Protein Carbonyl Content Assay (DNPH) ab126287** (most popular protein carbonyl content assay)

- **Protein Carbonyl Content Assay (Fluorometric) ab235631**

- **Protein Carbonyl Content ELISA (DNPH) ab238536**

Review the **oxidative stress marker and assay guide** to learn about more assays for oxidative stress.

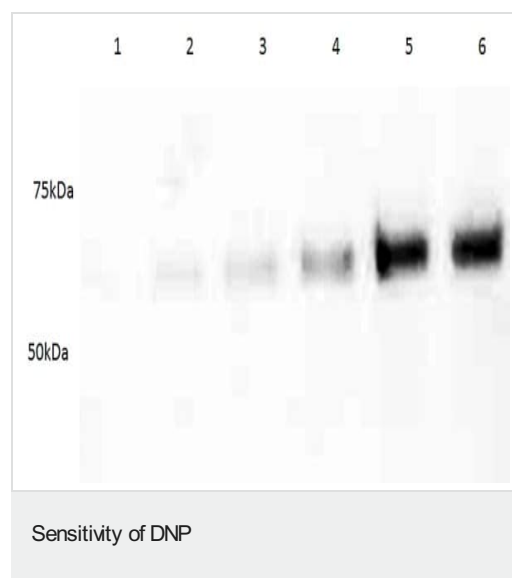
製品の特性

保存方法

Store at -80°C. Please refer to protocols.

内容	100 tests
12%SDS	1 x 2ml
1X 2,4-Dinitrophenylhydrazine (DNPH) solution	1 x 4ml
1X Derivatization Control Solution	1 x 4ml
2X Extraction Buffer	1 x 4ml
5000X HRP Conjugated Secondary Antibody	1 x 100µl
5000X Primary anti-DNP Antibody	1 x 100µl
Neutralization Solution	1 x 4ml
Standard protein with DNP residues	1 x 1ml

画像



Sensitivity of DNP detection demonstrated by serial dilution of DNP-derivatized BSA.

Lane 1: 5 ng BSA

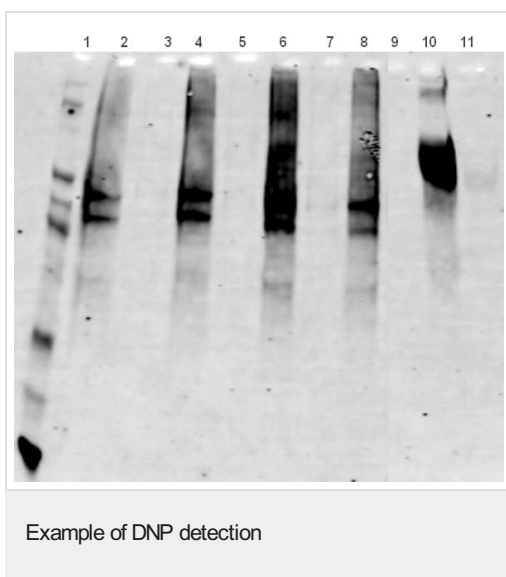
Lane 2: 10 ng BSA

Lane 3: 20 ng BSA

Lane 4: 40 ng BSA

Lane 5: 80 ng BSA

Lane 6: 160 ng BSA



Example of DNP detection demonstrated by DNP derivatized H₂O₂ treated HeLa cells.

Lane 1: MW ladder

Lane 2 (DNPH): HeLa cells with 0.1 mM H₂O₂, 15 minutes treatment.

Lane 3 (Negative Control): HeLa cells with 0.1 mM H₂O₂, 15 minutes treatment.

Lane 4 (DNPH): HeLa cells with 1 mM H₂O₂, 15 minutes treatment.

Lane 5 (Negative Control): HeLa cells with 1 mM H₂O₂, 15 minutes treatment.

Lane 6 (DNPH): HeLa cells with 10 mM H₂O₂, 15 minutes treatment.

Lane 7 (Negative Control): HeLa cells with 10 mM H₂O₂, 15 minutes treatment.

Lane 8 (DNPH): HeLa cells with 0 mM H₂O₂, 15 minutes treatment.

Lane 9 (Negative Control): HeLa cells with 0 mM H₂O₂, 15 minutes treatment.

Lane 10 (DNPH): BSA with DNPH derivatization.

Lane 11 (Negative Control): BSA with DNPH derivatization.

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