Catalog No. LF-MA0070

MONOCLONAL ANTIBODY

Anti-Peroxiredoxin II (9A1)

Background : Peroxiredoxin (Prx) is a growing peroxidase family, whose mammalian members have been known to connect with cell proliferation, differentiation, and apoptosis.
Many isoforms (about 50 proteins), collected in accordance to the amino acid sequence homology, particularly amino-terminal region containing active site cysteine residue, and the thiol-specific antioxidant activity, distribute throughout all the kingdoms. Among them, mammalian Prx consists of 6 different members grouped into typical 2-Cys, atypical 2-Cys Prx, and 1-Cys Prx. Except Prx VI belonging to 1-Cys Prx subgroup, the other five 2-Cys Prx isotypes have the thioredoxin-dependent peroxidase (TPx) activity utilizing thioredoxin, thioredoxin reductase, and NADPH as a reducing system. Mammalian Prxs are 20 – 30 kilodalton in molecular size and vary in subcellular localization: Prx I, II, and VI in cytosol, Prx III in mitochondria, Prx IV in ER and secretion, Prx V showing complicated distribution including peroxisome, mitochondria and cytosol.

Background Reference :

(1) Wood, Z. A. et al. (2003) *Trends Biochem Sci.* **28**(1):32-40.
(2) Rhee Sue Goo, et al (2001) *IUBMB life* **52**:35-41
(3) Min Hee Choi, et al (2005) *Nature letters* **435**(19) :347-353

Species cross reactivity		
Human	**Mouse**	**Rat**
+	+	+

Immunogen : Recombinant human protein purified from *E.coli*

Applications :
ELISA
Immunoprecipitation (1-2ul/400ul lysates)
Immunocytochemistry (20ul/ml)

Host : Mouse

Isotype : IgG2b, k

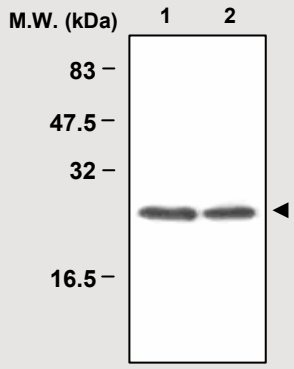
Clone number : 9A1

Composition : PBS containing 50% glycerol

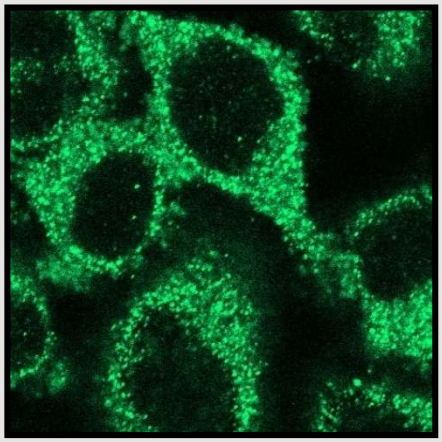
Positive control : HeLa cell lysates

Size : 100ul

Storage : Store for 1 year at -20°C from date of shipment



IMMUNOPRECIPITATION ANALYSIS of HeLa cell Lysates using Prx II (LF-MA0070) Antibody
Lane 1: Input Lane 2: Precipitates
Immunoblot : anti-Prx II polyclonal antibody (# LF-PA0007)



IMMUNOCYTOCHEMICAL STAINING of Human HeLa cells using Prx II(LF-MA0070) Antibody

Immunocytochemistry Protocol

Fixation
- Cells were cultured on coverslips.
- Immerse coverslips in 4% paraformaldehyde at room temperature for 40 minutes.
- Wash coverslips 2 times with 1xPBS.
- Quench cell in 50mM NH_4Cl for 10 minutes at room temperature.
- Aspirate off completely
- Wash the coverslips 2 times with 1xPBS.
- Aspirate off completely
- Permeabilize cell on coverslips with 0.2% Triton X-100 for 10 minutes at room temperature.

Blocking
- Block all coverslips with blocking solution at room temperature for 30minutes.

Staining
- Dilute the primary Antibody as appropriate in blocking solution.
- Incubate for 1 hour at room temperature.
- Wash blocking solution 10 minutes 3 times.
- Incubate all coverslips with a dilution of the Alexa green conjugated secondary Antibody in blocking solution.
- Wash all coverslips 3 times for 10 minutes each with 1xPBS.

Mounting and Observation
- Mount coverslips on slides
- Store slides at room temperature in the dark.
- Evaluate with fluorescence microscope.

*** Blocking Solution : 2% BSA in PBS**

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