

anti-Peroxiredoxin

Cat.# LF-MA0069

Product Name

anti-Peroxiredoxin $\text{\textcircled{E}}$ (13E7)

Pack Size

100 $\text{\textcircled{I}}$

Description

Mouse monoclonal to Peroxiredoxin I

Immunogen

Recombinant human protein purified from E.coli

Clonality

Monoclonal Antibody

Host

Mouse

Clone#

13E7

Isotype

IgG1

Cross Reactivity

Hu

Application

E
IP (1-2 $\text{\textcircled{I}}$)

Research Area

ROS Signaling

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.

Function

Involved in redox regulation of the cell. Reduces peroxides with reducing equivalents provided through the thioredoxin system but not from glutaredoxin. May play an important role in eliminating peroxides generated during metabolism. Might participate in the signaling cascades of growth factors and tumor necrosis factor alpha by regulating the intracellular concentrations of H₂O₂. Reduces an intramolecular disulfide bond in GDPD5 that gates the ability to GDPD5 to drive postmitotic motor neuron differentiation

Cellular Location

Cytoplasm Melanosome

Database Link

SwissProt : [Q06830](#)

GenelD : [5052.0](#)

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.

Positive Control

HeLa cells

Composition

HEPES with 0.15M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol

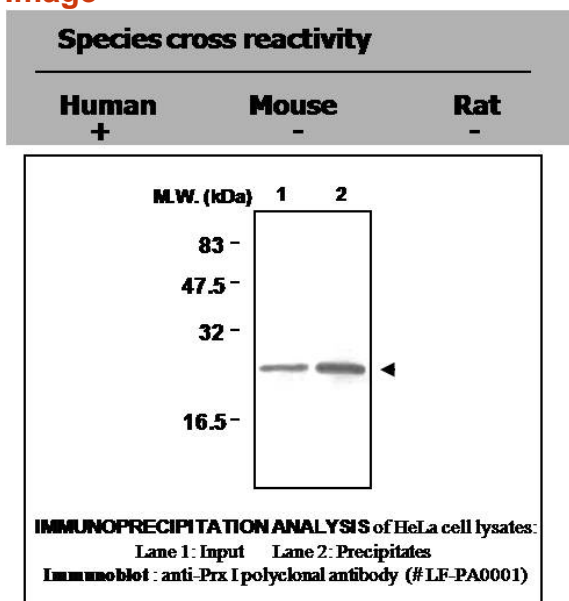
Storage

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

Conjugation

Unconjugated

Image



GENTAUER