

Product Information

Anti-Peroxiredoxin 6 (C-terminal)

produced in rabbit, affinity isolated antibody

Product Number **P0058**

Product Description

Anti-Peroxiredoxin 6 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human peroxiredoxin 6 (GeneID: 9588), conjugated to KLH. The corresponding sequence differs by one amino acid in rat and two amino acids in mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Peroxiredoxin 6 (C-terminal) recognizes human, rat, and mouse peroxiredoxin 6 (not tested in other species). The antibody can be used in several immunochemical techniques including immunoblotting (~25 kDa) and immunoprecipitation. Detection of the peroxiredoxin 6 band by immunoblotting is specifically inhibited by the immunizing peptide.

Peroxiredoxin 6, also named 1-Cys peroxiredoxin, is a member of the thiol-specific antioxidant peroxiredoxin family.¹ Peroxiredoxins are peroxidases that reduce hydrogen peroxide (H₂O₂) and alkyl hydroperoxides to water and alcohol, respectively, with the use of reducing equivalents provided by thiol-containing proteins.² Six mammalian peroxiredoxins have been identified. Peroxiredoxin 6 is the only one that contains a single redox-active cysteine and uses glutathione to catalyze the reduction of H₂O₂ and other organic peroxides.^{1,3} It is expressed in all tissues with the highest levels in the lung.⁴ Peroxiredoxin 6 is a bifunctional enzyme with peroxidase and phospholipase A₂ activities.⁵ Overexpression of peroxiredoxin 6 in cells protects them against oxidative damage, whereas knockdown of this enzyme results in oxidative stress and apoptosis.⁶ The phospholipase A₂ activity plays an important role in surfactant homeostasis.⁴ Therefore, peroxiredoxin 6 is a major antioxidant enzyme which functions in antioxidant defense and lung phospholipid metabolism.⁶⁻⁸

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1.0 µg/mL is recommended using a whole extract of human HeLa cells.

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using a whole extract of rat brain.

Immunoprecipitation: a working antibody amount of 2.0-5.0 µg is recommended using a whole extract of mouse brain.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,ST,KAA,TD,PHC,MAM 03/19-1