Technical Data Sheet

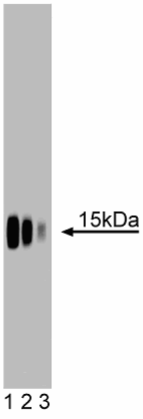
Purified Mouse Anti-Peroxiredoxin V

Product Information

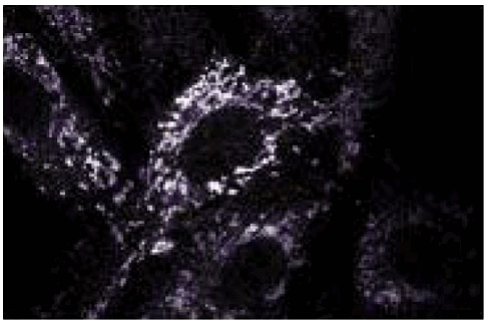
Material Number:	**612084**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	44/Peroxiredoxin V
Immunogen:	Rat Peroxiredoxin V aa. 114-213
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse
Target MW:	15 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Peroxisomes, ubiquitous organelles of eukaryotic cells, are involved in a number of metabolic processes. Their formation involves membrane generation, targeting and insertion of peroxisomal membrane proteins (PMPs) into the membrane, and transport of matrix proteins across the newly formed membrane. Peroxiredoxins are a family of peroxisomal proteins that includes peroxiredoxin I, II, III, IV, and V. These proteins are homologous to thioredoxin peroxidase, and have been implicated in the reduction of H2O2 levels. Peroxiredoxin V (aka AOEB166/PMP20) is a widely expressed peroxisome matrix protein that contains a C-terminal peroxisomal targeting signal 1 that facilitates binding to the PTS1 receptor, PEX5. Peroxiredoxin V is localized to the cytoplasm and peroxisomes, and displays thiol-specific antioxidant activity in vitro . In rat lung, acute inflammation induced by LPS is associated with an increase in Peroxiredoxin V mRNA levels. Other peroxiredoxins have been shown to reduce the amount of H2O2-induced apoptosis when overexpressed. Similarly, overexpression of Peroxiredoxin V inhibits p53-induced apoptosis. Thus, peroxiredoxin V may be an important anti-apoptotic enzyme found in peroxisomes.



Western blot analysis of Peroxiredoxin V on rat kidney lysate. *Lane 1: 1:10000, lane 2: 1:20000, lane 3: 1:40000 dilution of Peroxiredoxin V.*



Human Endothelial

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Kim H, Lee TH, Park ES. Role of peroxiredoxins in regulating intracellular hydrogen peroxide and hydrogen peroxide-induced apoptosis in thyroid cells. *J Biol Chem.* 2000; 275(24):18266-18270.(Biology)

Knoops B, Clippe A, Bogard C. Cloning and characterization of AOEB166, a novel mammalian antioxidant enzyme of the peroxiredoxin family. *J Biol Chem.* 1999; 274(43):30451-30458.(Biology)

Yamashita H, Avraham S, Jiang S. Characterization of human and murine PMP20 peroxisomal proteins that exhibit antioxidant activity in vitro. *J Biol Chem.* 1999; 274(42):29897-29904.(Biology)