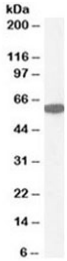
Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme (R33518)

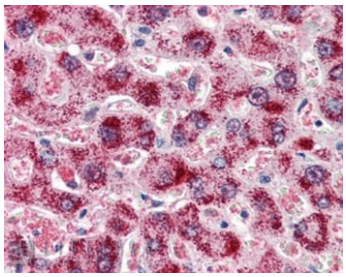
Catalog No.	Formulation	Size
R33518-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

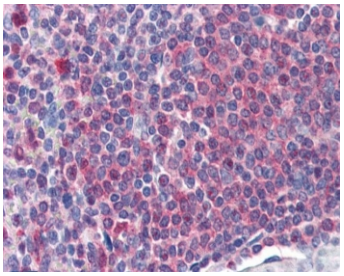
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Predicted Reactivity	Dog
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	847
Applications	Western blot: 0.3-1ug/ml Immunohistochemistry (FFPE): 2-4ug/ml ELISA (peptide) LOD: 1:32000
Limitations	This Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme is available for research use only.



Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme WB. Western blot analysis of human kidney lysate using Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme at 1 ug/ml. A distinct immunoreactive band is detected at approximately 60 kDa, consistent with the predicted molecular weight of catalase, supporting specific detection of the endogenous antioxidant enzyme in human kidney tissue.



Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme Human Liver IHC. Immunohistochemical staining of FFPE human liver tissue using Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme at 2 ug/ml. Catalase expression is detected predominantly within the cytoplasm of hepatocytes, consistent with its localization in peroxisomes and its essential role in hydrogen peroxide detoxification and maintenance of cellular redox homeostasis. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer prior to AP-based immunostaining.



Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme Human Spleen IHC. Immunohistochemical staining of FFPE human spleen tissue using Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme at 2 ug/ml. Catalase expression is detected predominantly within the cytoplasm of splenic lymphoid cells, consistent with its role in protecting immune cells from oxidative stress through the detoxification of hydrogen peroxide. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer prior to AP-based immunostaining.

Description

Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme recognizes catalase (CAT), a highly conserved antioxidant enzyme responsible for protecting cells against oxidative injury by converting hydrogen peroxide into water and oxygen. As one of the primary enzymatic defenses against reactive oxygen species, catalase prevents the accumulation of toxic peroxide generated during aerobic metabolism and cellular stress. This activity is essential for maintaining redox homeostasis and preserving the integrity of proteins, lipids, and nucleic acids. Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme is widely used for studies of oxidative stress, antioxidant defense, and cellular metabolism.

Catalase is localized predominantly within peroxisomes, where it detoxifies hydrogen peroxide generated during fatty acid metabolism and numerous additional oxidative reactions. The enzyme functions alongside superoxide dismutases, glutathione peroxidases, and other antioxidant systems to minimize oxidative damage and maintain normal cellular physiology. Catalase is expressed in a wide variety of tissues, particularly those with high metabolic activity, including liver, kidney, heart, lung, and skeletal muscle, reflecting its central role in protecting cells from oxidative stress.

Changes in catalase expression or activity have been associated with aging, chronic inflammation, diabetes, cardiovascular disease, neurodegenerative disorders, liver injury, pulmonary disease, and cancer. Because oxidative stress contributes to the pathogenesis of many human diseases, catalase has become an important biomarker for evaluating antioxidant capacity and cellular responses to environmental and metabolic insults. Continued investigation of catalase has improved understanding of redox regulation, peroxisome biology, and mechanisms of tissue injury and repair.

NSJ Bioreagents' Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme provides reliable detection of endogenous catalase in immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related applications. These antibodies support investigations into oxidative stress, peroxide metabolism, antioxidant defense, and peroxisomal function while providing dependable performance for basic, translational, and disease-focused research.

Learn more about catalase biology, antioxidant defense, and additional validated products on our Catalase Antibody page.

Application Notes

Optimal dilution of the Catalase Antibody / Hydrogen Peroxide Detoxification Enzyme should be determined by the researcher.

Immunogen

Amino acids DKYNAEKPKNAIHT were used as the immunogen for this Catalase antibody.

Storage

Aliquot and store the Catalase antibody at -20oC.

Alternate Names

Catalase antibody, CAT antibody, Peroxisomal Catalase antibody, Hydrogen Peroxide Detoxification Enzyme antibody, Hydroperoxidase antibody, Antioxidant Enzyme antibody

Ordering: Phone: 858.663.9055 | Fax: 1.267.821.0800 | Email: info@nsjbio.com
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