

Datasheet for 100-4151**Catalase Antibody****Overview**

Description:	Anti-Catalase (RABBIT) Antibody - 100-4151
Item No.:	100-4151
Size:	2 mL
Applications:	WB, IF, Multiplex
Reactivity:	Human, Mouse, Rat, Bovine, Sheep
Host Species:	Rabbit

Product Details

Background:	Anti-Catalase Antibody detects catalase. Catalase is a common enzyme found in nearly all living organisms exposed to oxygen. It catalyzes the decomposition of hydrogen peroxide to water and oxygen. Catalase is necessary in cells to protect them from the toxic effects of hydrogen peroxide and to promote growth of cells. Anti-Catalase antibody is ideal for investigators involved in Cell Signaling, Neuroscience and Signal Transduction research.
Synonyms:	rabbit anti-Catalase Antibody, Cas 1 antibody, CAT antibody, Cs1 antibody, MGC138422 antibody, MGC138424 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CAT
Reactivity:	Human, Mouse, Rat, Bovine, Sheep
Immunogen Type:	Native Protein
Immunogen:	Anti-Catalase Antibody was produced by repeated immunizations with bovine liver catalase protein.

Purity/Specificity: Anti-Catalase Antibody was prepared from monospecific antiserum by delipidation and defibrination. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Catalase [Bovine Liver]. Cross reactivity against Catalase from other tissues and species may occur but has not been specifically determined.

Relevant Links:

- [NCBI - AAI03067.1](#)
- [UniProtKB - P00432](#)
- [GeneID - 531682](#)

Application Details

Tested Applications:	WB
Suggested Applications:	IF, Multiplex (Based on references)
Application Note:	Anti-Catalase Antibody has been tested by western blotting and is suitable for IHC and for ELISA. Researchers should determine optimal titers for applications that are not stated below.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:100,000 - 1:1,000,000
IHC:	User Optimized
WB:	1:5,000 - 1:20,000

Formulation

Physical State:	Lyophilized
Concentration:	85 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	2.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

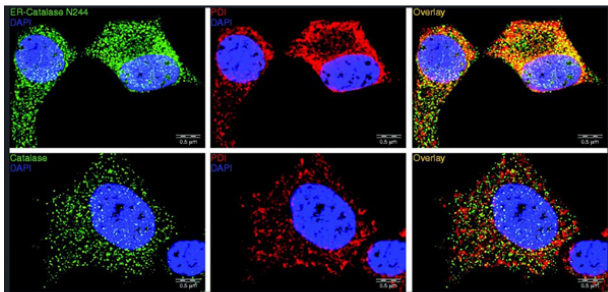
Shipping & Handling

Shipping Condition: Ambient

Storage Condition: Store Catalase Antibody at 4° C prior to restoration. For extended storage aliquot antibody and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

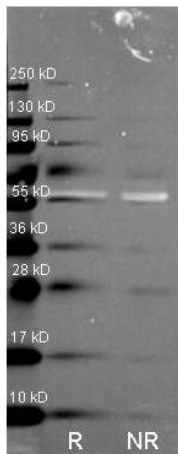
Expiration: Expiration date is one (1) year from date of receipt.

Images



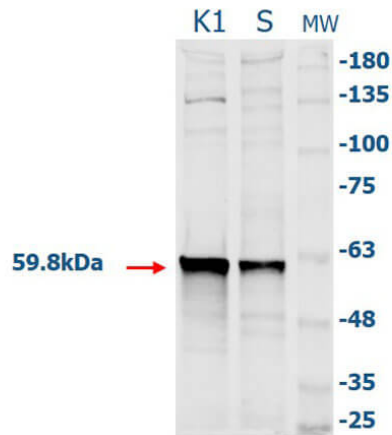
Immunofluorescence Microscopy

Subcellular localisation of ER-Catalase N244 and WT catalase in insulin-secreting INS-1E cells. Cells were seeded on LabTek chamber slides. After fixation and permeabilisation the cells were stained with specific antibodies for catalase (green) and for the ER-specific protein disulfide isomerase (PDI, red), followed by counterstaining with DAPI (blue). Fig 1. PMID: 26108484.



Western Blot

Western Blot of Rabbit anti-Catalase antibody. Lane R: Reduced samples of purified Catalase. Lane NR: Non-reduced samples of purified Catalase. Load: ~1ug of protein per lane. Primary antibody: Catalase antibody at 1:1000 for overnight at 4°C. Secondary antibody: Dylight488™ rabbit secondary antibody at 1:10,000 for 1.5 hrs at RT. Block: MB-070 overnight at 4°C. Predicted/Observed size: 59.9 kDa, 55 kDa for catalase. Other band(s): none.

**Western Blot**

Western Blot of Rabbit Anti-Catalase (Bovine Liver) Antibody. Lane 1: CHO K1 Lysate 10 μ g. Lane 2: CHO S Lysate 10 μ g. Lane 3: Opal Pre-stained Molecular Weight Marker (p/n MB-210-0500). Primary Antibody: Rabbit Anti-Catalase at 1:500 overnight at 2-8 $^{\circ}$ C. Secondary Antibody: Goat Anti-Rabbit IgG CY5 (p/n 611-110-122) at 1:10,000 for 30 in at RT. Expect: ~59.8kDa.

References

- Šrut M et al. Aging Cell Culture - Genetic and Metabolic Effects of Passage Number on Zebrafish Z3 Cells. *Cell Physiol Biochem.* (2022)
- Morita, M et al. Generation of an immortalized astrocytic cell line from Abcd1-deficient H-2KbtsA58 mice to facilitate the study of the role of astrocytes in X-linked adrenoleukodystrophy. *Heliyon* (2021)
- Di Cicco M et al. Effects of diclofenac on the swimming behavior and antioxidant enzyme activities of the freshwater interstitial crustacean *Bryocamptus pygmaeus* (Crustacea, Harpacticoida). *Sci Total Environ.* (2021)
- Colasuonno F et al. Mitochondrial and peroxisomal alterations contribute to energy dysmetabolism in Riboflavin Transporter Deficiency *Oxid Med Cell Longev.* (2020)
- Van Veldhoven PP et al. Slc25a17 Gene Trapped Mice: PMP34 Plays a Role in the Peroxisomal Degradation of Phytanic and Pristanic Acid. *Front Cell Dev Biol.* (2020)
- Terra LF et al. Heat shock protein B1 is a key mediator of prolactin-induced beta-cell cytoprotection against oxidative stress. *Free Radic Biol Med.* (2019)
- Morvay PL et al. Differential activities of peroxisomes along the mouse intestinal epithelium. *Cell Biochem Funct.* (2017)
- Lortz et al. Impact of scavenging hydrogen peroxide in the endoplasmic reticulum for β cell function. *Journal of Molecular Endocrinology* (2015)
- Misdaq M et al. Thiopurines induce oxidative stress in T-lymphocytes: a proteomic approach. *Mediators Inflamm.* (2015)
- Lortz S et al. N-glycosylation-negative catalase: a useful tool for exploring the role of hydrogen peroxide in the endoplasmic reticulum. *Free Radic Biol Med.* (2014)
- Bloch K et al. A strategy for the engineering of insulin producing cells with a broad spectrum of defense properties. *Biomaterials.* (2011)
- Vincent AM, Kato K, McLean LL, Soules ME, Feldman EL. Sensory neurons and schwann cells respond to oxidative stress by increasing antioxidant defense mechanisms. *Antioxid Redox Signal.* (2009)
- Shashoua VE et al. New synthetic peptides can enhance gene expression of key antioxidant defense enzymes in vitro and in vivo. *Brain Res.* (2004)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.