

**Goat Anti-Catalase / CAT Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1195a

**Specification**

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**Goat Anti-Catalase / CAT Antibody - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P04040</a>
Other Accession	<a href="#">NP_001743</a> , <a href="#">847</a> , <a href="#">12359 (mouse)</a>
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5mg/ml
Isotype	IgG
Calculated MW	59756

**Goat Anti-Catalase / CAT Antibody - Additional Information**

**Gene ID** 847

**Other Names**

Catalase, 1.11.1.6, CAT

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-Catalase / CAT Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-Catalase / CAT Antibody - Protein Information**

**Name** CAT

**Function**

Catalyzes the degradation of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) generated by peroxisomal oxidases to water and oxygen, thereby protecting cells from the toxic effects of hydrogen peroxide (PubMed:[7882369](http://www.uniprot.org/citations/7882369)). Promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells (PubMed:[7882369](http://www.uniprot.org/citations/7882369)).

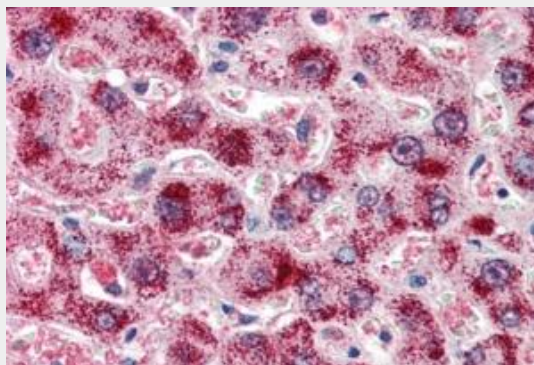
**Cellular Location**  
Peroxisome matrix

### Goat Anti-Catalase / CAT Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-Catalase / CAT Antibody - Images



AF1195a (2  $\mu\text{g/ml}$ ) staining of paraffin embedded Human Liver. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



AF1195a (1  $\mu\text{g/ml}$ ) staining of Human Kidney lysate (35  $\mu\text{g}$  protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### Goat Anti-Catalase / CAT Antibody - Background

This gene encodes catalase, a key antioxidant enzyme in the body's defense against oxidative stress. Catalase is a heme enzyme that is present in the peroxisome of nearly all aerobic cells.

Catalase converts the reactive oxygen species hydrogen peroxide to water and oxygen and thereby mitigates the toxic effects of hydrogen peroxide. Oxidative stress is hypothesized to play a role in the development of many chronic or late-onset diseases such as diabetes, asthma, Alzheimer's disease, systemic lupus erythematosus, rheumatoid arthritis, and cancers. Polymorphisms in this gene have been associated with decreases in catalase activity but, to date, acatalasemia is the only disease known to be caused by this gene.

#### **Goat Anti-Catalase / CAT Antibody - References**

The association of -262C/T polymorphism in the catalase gene and delayed graft function of kidney allografts. Dutkiewicz G, et al. *Nephrology (Carlton)*, 2010 Aug. PMID 20649881. Epistasis of oxidative stress-related enzyme genes on modulating the risks in oral cavity cancer. Wu SH, et al. *Clin Chim Acta*, 2010 Nov 11. PMID 20643115. Variation at the NFATC2 Locus Increases the Risk of Thiazolinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. *Diabetes Care*, 2010 Jul 13. PMID 20628086. Promoter Variant in the Catalase Gene Is Associated with Vitiligo in Chinese People. Liu L, et al. *J Invest Dermatol*, 2010 Jul 8. PMID 20613769. [Effects of catalase gene (RS769217) polymorphism on energy homeostasis and bone status are gender specific] Vitai M, et al. *Orv Hetil*, 2010 Jun 6. PMID 20494887.