10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# CAT Antibody (Center) (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2118a

## Product Information

| | |
|---|---|
| **Application** | WB, E |
| **Primary Accession** | P04040 |
| **Other Accession** | P04762, O62839, P24270, Q9PT92, P00432, NP_001743.1 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Rat, Zebrafish, Pig, Bovine |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a |
| **Clone Names** | 626CT4.3.8 |
| **Calculated MW** | 59756 |
| **Antigen Region** | 152-180 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 847 |
| **Other Names** | Catalase, CAT |
| **Target/Specificity** | This CAT antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 152-180 amino acids from the Central region of human CAT. |
| **Dilution** | WB~~1:100~1600 E~~Use at an assay dependent concentration. |
| **Format** | Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CAT Antibody (Center) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

| | |
|---|---|
| **Name** | CAT |
| **Function** | Catalyzes the degradation of hydrogen peroxide (H(2)O(2)) generated by peroxisomal oxidases to water and oxygen, thereby protecting cells from the toxic effects of hydrogen peroxide (PubMed: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).

**Cellular Location** Peroxisome matrix

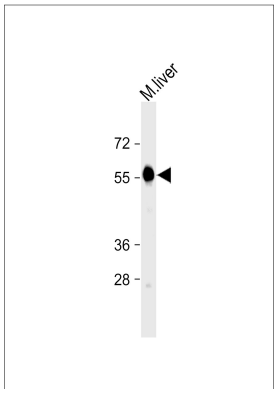
## Background

This gene encodes catalase, a key antioxidant enzyme in the bodies 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.

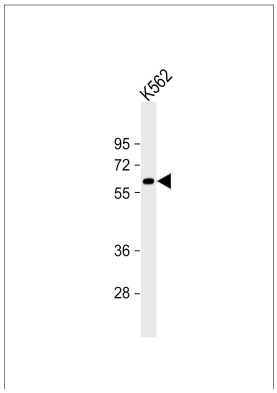
## References

Banerjee, M., et al. Toxicol. Appl. Pharmacol. 249(1):47-54(2010)
Wu, S.H., et al. Clin. Chim. Acta 411 (21-22), 1705-1710 (2010) :
Liu, L., et al. J. Invest. Dermatol. 130(11):2647-2653(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Dutkiewicz, G., et al. Nephrology (Carlton) 15(5):587-591(2010)

## Images




Anti-CAT Antibody (Center) (Ascites) at 1:1600 dilution + mouse liver lysate Secondary Goat Anti-mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution. Predicted band size : 59756 Da Blocking/Dilution buffer: 5% NFDM/TBST.




Anti-CAT Antibody (Center) (Ascites) at 1:1600 dilution + K562 whole cell lysate Secondary Goat Anti-mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution. Predicted band size : 59756 Da Blocking/Dilution buffer: 5% NFDM/TBST.

## Citations

- Inhibition of p38 MAPK sensitizes tumour cells to cisplatin-induced apoptosis mediated by reactive oxygen species and JNK.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.