

catalase (h): 293T Lysate: sc-112459

BACKGROUND

Catalase is a peroxisome specific marker protein belonging to the catalase family. Defects in the gene encoding for the catalase protein can cause acatalasia, a disease characterized by the absence of catalase activity in red cells and associated with ulcerating oral lesions. Catalase is also an important regulator of oxidative stress and inflammation, and may contribute to the development of rheumatoid arthritis. Catalase, which can form a homotetramer, is found in nearly all aerobically respiring organisms and functions in protecting cells from the toxic effects of hydrogen peroxide.

REFERENCES

1. Aubourg, P., et al. 1993. Pseudo infantile Refsum's disease: catalase deficient peroxisomal particles with partial deficiency of plasmalogen synthesis and oxidation of fatty acids. *Pediatr. Res.* 34: 270-276.
2. Rodriguez-Esparragon, F.J., et al. 2003. Peroxisome proliferator-activated receptor- γ 2-Pro12Ala and endothelial nitric oxide synthase-4a/b gene polymorphisms are associated with essential hypertension. *J. Hypertens.* 21: 1649-1655.
3. Rosmond, R., et al. 2003. The Pro12Ala PPAR γ 2 gene missense mutation is associated with obesity and insulin resistance in Swedish middle-aged men. *Diabetes Metab. Res. Rev.* 19: 159-163.
4. El-Sohemy, A., et al. 2005. Catalase and PPAR γ 2 genotype and risk of rheumatoid arthritis in Koreans. *Rheumatol. Int.* 26: 388-392.
5. Eny, K.M., et al. 2005. Catalase and PPAR γ 2 genotype and risk of systemic lupus erythematosus in Koreans. *Lupus* 14: 351-355.
6. Zhao, X., et al. 2006. 15d-Prostaglandin J2 activates peroxisome proliferator-activated receptor- γ , promotes expression of catalase, and reduces inflammation, behavioral dysfunction, and neuronal loss after intracerebral hemorrhage. *J. Cereb. Blood Flow Metab.* 26: 811-820.
7. Terlecky, S.R., et al. 2006. Peroxisomes and aging. *Biochim. Biophys. Acta* 1763: 1749-1754.
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CHROMOSOMAL LOCATION

Genetic locus: CAT (human) mapping to 11p13.

PRODUCT

catalase (h): 293T Lysate represents a lysate of human catalase transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

catalase (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive catalase antibodies. Recommended use: 10-20 μ l per lane.

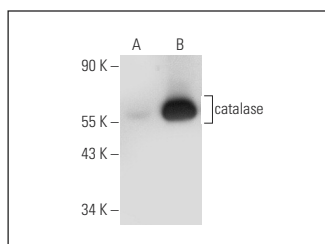
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

catalase (A-7): sc-271242 is recommended as a positive control antibody for Western Blot analysis of enhanced human catalase expression in catalase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

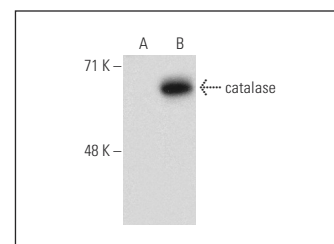
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



catalase (A-7): sc-271242. Western blot analysis of catalase expression in non-transfected: sc-117752 (A) and human catalase transfected: sc-112459 (B) 293T whole cell lysates.



catalase (A-4): sc-271358. Western blot analysis of catalase expression in non-transfected: sc-117752 (A) and human catalase transfected: sc-112459 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.