

catalase (F-17): sc-34285

BACKGROUND

Catalase is a peroxisome specific marker protein belonging to the catalase family. Defects in the gene encoding for the catalase protein, CAT, 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.

CHROMOSOMAL LOCATION

Genetic locus: CAT (human) mapping to 11p13; Cat (mouse) mapping to 2 E2.

SOURCE

catalase (F-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of catalase of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34285 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

catalase (F-17) is recommended for detection of catalase of mouse, rat, human and mink origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

catalase (F-17) is also recommended for detection of catalase in additional species, including canine and porcine.

Suitable for use as control antibody for catalase siRNA (h): sc-45330, catalase siRNA (m): sc-45331, catalase shRNA Plasmid (h): sc-45330-SH, catalase shRNA Plasmid (m): sc-45331-SH, catalase shRNA (h) Lentiviral Particles: sc-45330-V and catalase shRNA (m) Lentiviral Particles: sc-45331-V.

Molecular Weight of catalase: 64 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Mv 1 Lu cell lysate: sc-3810 or catalase (h): 293T Lysate: sc-112459.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

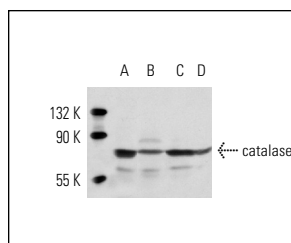
PROTOCOLS

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

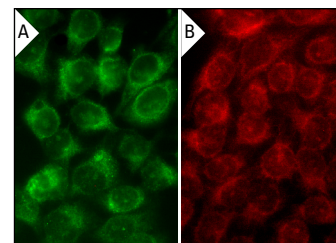
RESEARCH USE

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

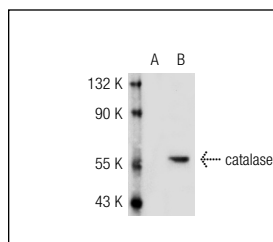
DATA



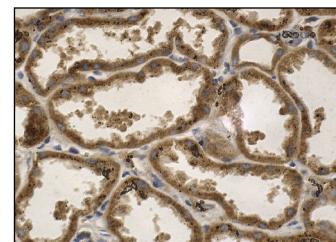
catalase (F-17): sc-34285. Western blot analysis of catalase expression in HeLa (A), Jurkat (B), Mv 1 Lu (C) and WI-38 (D) whole cell lysates.



catalase (F-17): sc-34285. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A, B).



catalase (F-17): sc-34285. Western blot analysis of catalase expression in non-transfected: sc-117752 (A) and human catalase transfected: sc-112459 (B) 293T whole cell lysates.



catalase (F-17): sc-34285. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Dias, J.P., et al. 2010. Kinin B1 receptor enhances the oxidative stress in a rat model of Insulin resistance: outcome in hypertension, allodynia and metabolic complications. *PLoS ONE* 5: e12622.
2. McCommis, K.S., et al. 2011. Hypercholesterolemia increases mitochondrial oxidative stress and enhances the MPT response in the porcine myocardium: beneficial effects of chronic exercise. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 301: R1250-R1258.
3. Chen, T., et al. 2012. Cardioprotection from oxidative stress in the newborn heart by activation of PPARγ is mediated by catalase. *Free Radic. Biol. Med.* 53: 208-215.

MONOS
Satisfaction
Guaranteed

Try **catalase (H-9): sc-271803** or **catalase (A-7): sc-271242**, our highly recommended monoclonal alternatives to catalase (F-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **catalase (H-9): sc-271803**.