**BACKGROUND**

Catalase is a peroxisome specific marker protein belonging to the catalase family. Defects in the gene encoding for the catalase protein can cause cata-
lasia, 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 protect-
ing cells from the toxic effects of hydrogen peroxide.

**REFERENCES**

deficient peroxisomal particles with partial deficiency of plasmalog en 
receptor-γ-Pro12Ala and endothelial nitric oxide synthase-4a/b gene 
polymorphisms are associated with essential hypertension. J. Hypertens. 
21: 1649-1655.
is associated with obesity and Insulin resistance in Swedish middle-aged 
5. El-Sohemy, A., et al. 2006. Catalase and PPARγ2 genotype and risk of 
proliferator-activated receptor-γ, promotes expression of catalase, 
and reduces inflammation, behavioral dysfunction, and neuronal loss 
26: 811-820.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Catalase (E-7) is a mouse monoclonal antibody raised against amino acids 
1-300 mapping at the N-terminus of catalase of human origin.

**PRODUCT**

Each vial contains 200 μg IgG1 kappa light chain in 1.0 ml of PBS with <0.1% 
sodium azide and 0.1% gelatin.

**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 for detailed protocols and support 
products.

**APPLICATIONS**

catalase (E-7) is recommended for detection of catalase of human origin 
by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of catalase: 64 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MCF7 whole cell 
lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP 
(Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ 
Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: 
sc-2233 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipit-
itation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 
3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: 
sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: 
sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

- **Western Blotting**
  - catalase (E-7): sc-365738. Western blot analysis 
  - catalase (E-7): sc-365738. Immunoperoxidase staining 

- **Immunoperoxidase Staining**
  - human kidney tissue showing cytoplasmic staining of cells in tubules

**RESEARCH USE**

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

**CONJUGATES**

See catalase (H-9): sc-271803 for catalase antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 
488 and Alexa Fluor® 647.