
Product Name: KD-Validated Catalase Recombinant Rabbit Monoclonal Antibody
Catalog #: KVA00798

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 59.8kDa

Antigen Information

Gene Name	CAT
Alternative Names	CAT; Catalase; EC 1.11.1.6; Epididymis Secretory Sperm Binding Protein
Gene ID	847.0
SwissProt ID	P04040
Immunogen	A synthesized peptide derived from human Catalase

Background

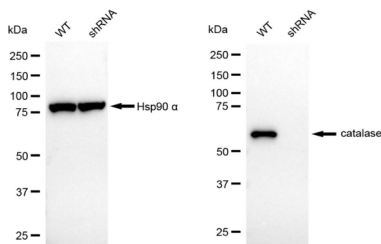
This gene encodes catalase, a key antioxidant enzyme in the bodies defense against oxidative stress. Catalase is a heme enzyme that is present in the peroxisome of nearly all aerobic cells. Catalase converts the reactive oxygen species hydrogen peroxide to water and oxygen and thereby mitigates the toxic 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. [provided by RefSeq, Oct 2009]

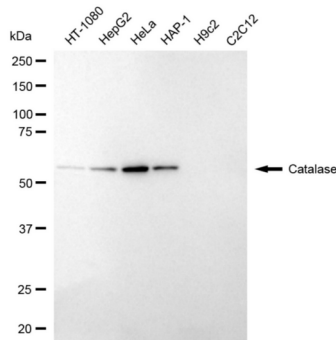
Research Area

Tags & Cell Markers, Signal Transduction, Cardiovascular, Cancer, Metabolism

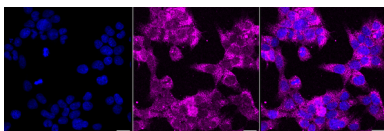
Image Data



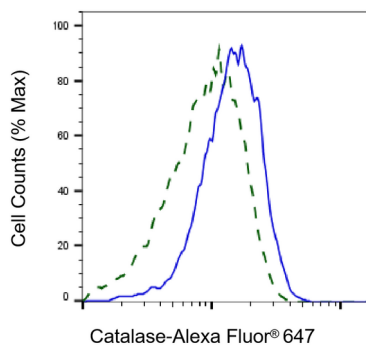
Western blotting analysis using catalase antibody (KVA00798). Catalase expression in wild type (WT) and catalase (CAT) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with catalase antibody (KVA00798, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



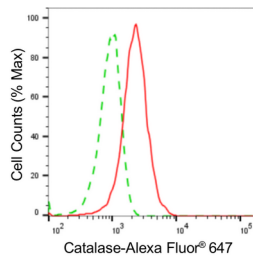
Western blotting analysis using catalase antibody (KVA00798). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with catalase antibody (KVA00798, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HeLa cells with Catalase antibody (KVA00798, 1:1,000). Nuclei were stained blue with DAPI; Catalase was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.



Validation of Catalase knockdown using flow cytometry. Wild-type (WT, Blue) and knockdown (KD, Green) HeLa cells were stained with Catalase antibody (KVA00798, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of catalase expression in HeLa cells using catalase antibody (KVA00798, 1:2,000). Green, isotype control; red, catalase.