

#12980 Store at -20°C

Catalase (D4P7B) XP® Rabbit mAb



Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H	Endogenous	60	Rabbit IgG	#P04040	847

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Catalase (D4P7B) XP® Rabbit mAb recognizes endogenous levels of total catalase protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human catalase protein.

Background

Catalase catalyzes the conversion of hydrogen peroxide to water and oxygen (1). Research studies show that overexpression of this antioxidant enzyme increases the ability of pancreatic β-cells to scavenge reactive oxygen species (ROS), thereby protecting pancreatic β-cells from oxidative stress (2). The pancreatic β-cells overexpressing this enzyme are also protected from hydrogen peroxide-mediated lipotoxicity, providing further evidence for the importance of catalase in the pathogenesis of diabetes (3).

Background References

- Chelikani, P. et al. (2004) *Cell Mol Life Sci* 61, 192-208.
- Chen, H. et al. (2005) *Diabetes* 54, 1437-46.
- Elsner, M. et al. (2011) *Diabetes* 60, 200-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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