

Store at  
-20C  
#12980**Catalase (D4P7B) XP<sup>®</sup> Rabbit mAb**

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

<b>Applications:</b> W, IP, IHC-P, IF-IC	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 60	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P04040	<b>Entrez-Gene Id:</b> 847
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:50  
1:3000 - 1:12000  
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.

For a carrier free (BSA and azide free) version of this product see product #92532.

**Specificity/Sensitivity**

Catalase (D4P7B) XP<sup>®</sup> 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**

**W:** Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

**H:** Human

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