

Product Information

Catalase-Agarose, Enzyme from Bovine Liver

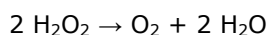
Ammonium sulfate suspension

C9284

Storage temperature 2–8 °C.

Product Description

Catalase (EC 1.1.1.6) is a metalloenzyme that catalyzes the conversion of hydrogen peroxide to water and molecular oxygen:



Catalase from bovine liver is a tetrameric enzyme that consists of 4 equal subunits of molecular mass of 57-60 kDa, for a net molecular mass of 228-240 kDa.^{1,2} Each subunit contains iron (ferric state, Fe^{III}) that is bound to a protoheme IX group. Catalase also strongly binds NADP⁺/NADPH.²

Catalase has general activity over a pH range of 5.1 to 8.³ Catalase has optimal activity at pH ~7.⁴

This catalase-agarose product is prepared by the immobilization of catalase, originally isolated from bovine liver, to activated 4% cross-linked beaded agarose. Several references have cited use of this product for quenching of H₂O₂.^{4,5} Buffers that contain heme-inactivating agents, such as cyanide and azide, should **not** be used with this catalase-agarose product.

Components

This catalase-agarose product is sold as an ammonium sulfate suspension, with preservative.

Preparation Instructions

General instructions for re-suspension of our enzyme-agarose conjugates include the following steps.

- Suspend the lyophilized enzyme-agarose to 5-10 mg solid/mL water.
- Allow brief hydration of the lyophilized powder.
- Filter and wash the rehydrated enzyme-agarose product several times with either water or your intended buffer.
- Re-suspend the enzyme-agarose in your intended buffer. The product is now ready for use.

Storage/Stability

For re-use of our enzyme-agarose conjugates, the following steps may be used as a general guide.

- Wash the enzyme-agarose with water and/or buffer until it is free of substrates.
- For long-term storage, enzyme-agarose products may be re-converted to their dry form, as follows:
 - Wash the enzyme-agarose with the buffer of choice.
 - Drain excess buffer.
 - Dry the enzyme-agarose in a vacuum desiccator.
 - Store the freshly lyophilized enzyme-agarose at 2–8 °C.

Precautions and Disclaimer

For research use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

References

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5. Ghesguière, B. *et al.*, *Mol. Cell. Proteomics*, **10(5)**, M110.006866 (2011).
6. Zhang, X., *Mol. Cell. Proteomics*, **15(12)**, 3665-3684 (2016).

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