

Product Information

Carboxypeptidase A-Agarose

Ammonium sulfate suspension, ≥ 6 units/mL packed gel, enzyme from bovine pancreas

C1261

Product Description

Storage Temperature: 2-8 °C

Carboxypeptidase A (EC 3.4.17.1) is a zinc-dependent metalloexoproteinase that hydrolyzes C-terminal amino acid residues from proteins.^{1,2}

Carboxypeptidase A has a recognition preference for tyrosine (Tyr), phenylalanine (Phe), tryptophan (Trp), and leupeptin (Leu) residues as C-terminal amino acids.³ Carboxypeptidase A has a molecular mass of ~ 34 kDa.⁴

Carboxypeptidase A has general activity in the pH range of 6-9.³ The enzyme has optimal activity in the pH range of 7-8.⁴

This carboxypeptidase A-agarose product is prepared by the immobilization of carboxypeptidase A, originally isolated from bovine pancreas, to activated 4% crosslinked beaded agarose. Several references have cited use of this product in such applications as removal of various tags,⁵ such as the 6-histidine tag,⁶⁻⁸ from recombinant proteins.

Buffers with chelating agents such as EDTA should **not** be used with this carboxypeptidase A-agarose product, because chelating agents can bind the zinc from carboxypeptidase A and render the enzyme inactive.

Precautions and Disclaimer

This product is for R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Product

This carboxypeptidase A-agarose product is sold as a 2.0 M ammonium sulfate suspension, pH 7, with 1 mM MgCl₂ and 0.1 mM ZnCl₂ also present.

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.

References

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4. Shoman, G. *et al.*, *Proc. Nat. Acad. Sci. USA*, **81(24)**, 7767-7771 (1984).
5. Wu, Y. *et al.*, *Nat. Commun.*, **13**, 260 (2022).
6. Iourin, O. *et al.*, *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.*, **69(Pt 1)**, 35-38 (2013).
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