

Dissociation Reagents

Papain

For digestion of the extracellular matrix of cartilage



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Catalog # 07465
07466

25 mg
100 mg

Product Description

Papain is a cysteine protease consisting of a single polypeptide containing three disulfide bridges. Native crystalline papain is unreactive until acted upon by mild reducing agents, e.g., cysteine, sulfide, or sulfite, and therefore likely exists as a zymogen. Papain has a wide specificity with a preference towards arginine, lysine, and phenylalanine. This enzyme degrades protein substrates such as the intercellular matrices of cartilage more extensively than pancreatic proteases and is typically less damaging and more effective than other proteases for tissue dissociation applications (Huettnner & Baugham; Lam) and has also been used for the dissociation of neural tissue (Fasano et al.).

Product Information

Alternative Names:	Papainase; Papaya peptidase I
Format:	Lyophilized powder
Storage:	Store at 2 - 8°C.
Stability:	Stable as supplied for 6 months from date of receipt.
Reconstitution:	Dissociation reagents can be reconstituted in a balanced salt solution or buffer of choice.
Molecular Weight:	23.4 kDa
CAS Number:	9001-73-4
Optimum pH:	6.0 - 7.0
Cleavage Site:	-X-t-Y- : X = preference for Arg, Lys, and Phe, otherwise nonspecific; Y = nonspecific

Please refer to the Safety Data Sheet (SDS) for hazard information.

Specifications

Source:	Carica papaya latex
Activity:	Activates to at least 15 units/mg protein (refer to Certificate of Analysis for lot-specific % protein). See Notes for further information.

Directions for Use

Papain should be activated immediately before use. To ensure full activity, incubate reconstituted Papain in a solution containing 1.1 mM EDTA, 0.067 mM mercaptoethanol, and 5.5 mM cysteine-HCl for 30 minutes. If a sterile solution is required, the Papain solution can be filtered through a 0.22 µm filter after activation.

Notes

ACTIVITY UNITS

1 unit hydrolyzes 1 µmol of Nα- benzoyl-L-arginine ethyl ester (BEAA)/minute at 25°C, pH 6.2, after activation.

Related Products

For a complete list of dissociation reagents, as well as related products available from STEMCELL Technologies, visit www.stemcell.com or contact us at techsupport@stemcell.com.

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