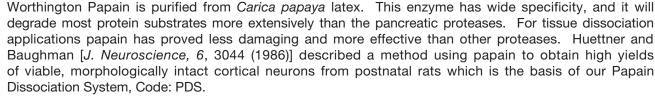




PAPAIN

Neural Cell Isolation/Immunochemistry







Worthington also produces a lyophilized form of our widely used crystalline papain preparation. This product (Code: PAPL) can be used in place of the aqueous suspension preparation for immunochemical and cell isolation applications. It offers the convenience, stability and versatility of a lyophilized powder along with the enzymatic activity of the liquid preparation.

Description	Activity	Code	Catalog No.	Size	Price
Suspension, Twice Crystallized 0.22µm Filtered A suspension in 0.05M sodium acetate, pH 4.5. It is recommended that the enzyme be fully activated before use in a solution containing 1.1mM EDTA, 0.067mM mercaptoethanol and 5.5mM cysteine-HCl for 30 minutes. Store at 2 - 8°C.	Activates to ≥ 20 Units per mg protein	РАР*	LS003124 LS003126 LS003127 LS003128	25 mg 100 mg 1 gm Bulk	\$ 36.00 80.00 520.00 Inquire
Lyophilized Powder Prepared from twice crystallized suspension containing sodium acetate. It is recommended that before use, the enzyme be fully activated as described above. Store at 2 - 8°C.	Activates to ≥ 15 Units per mg protein	PAPL	LS003118 LS003119 LS003120 LS003122	25 mg 100 mg 1 gm Bulk	\$ 38.00 90.00 595.00 Inquire
Papain Vial, PDS Kit Component Papain containing L-cysteine and EDTA, five single use 100 unit vials per package. This material is 0.22µm membrane filtered and lyophilized in autoclaved vials. A vial reconstituted with five mls of EBSS (vial 1) yields a solution at 20 units of papain per ml in one millimolar L-cysteine with 0.5mm EDTA. Brief incubation is needed to insure full solubility and activity. Store at 2 - 8°C.	Activates to ≥ 100 Units per vial	PAP2	LK003176 LK003178	1 vi 5 vi	\$ 26.00 88.00

^{*}Requires special shipping

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Papain has a molecular weight of 23,000 daltons and an optimum pH range of 6.0 - 7.0. It may exist as a zymogen since native crystalline papain is unreactive until acted upon by mild reducing agents, e.g., cysteine or cyanide. In addition to its proteolytic activity, papain is also an esterase. The action of papain on leucine methyl ester produces an insoluble polyleucine peptide. Papain is activated by cysteine, sulfide, and sulfite. It is enhanced when heavy metal binding agents such as EDTA are also present. N-bromosuccinimide enhances enzyme activity. Papain is inhibited by sulfhydryl reagents, heavy metals, ovomucoid trypsin inhibitor and carbonyl reagents. Papain may be inactivated by H2O2, the active SH group being oxidized to sulfenic acid. Papain is assayed using a titrimetric determination of the acid produced during the hydrolysis of benzoyl-Larginine ethyl ester (BAEE). It is recommended that the enzyme be fully activated before use. Stabilizing agents are EDTA, cysteine and dimercaptoethanol.

Stability: Stable for 6 months at 2 - 8°C.

Storage: Store at 2 - 8°C. Do not freeze aqueous suspensions.

Unit Definition: 1 unit hydrolyzes 1 µmole of benzoyl-L-arginine ethyl ester per minute at 25°C, pH 6.2, after activation in a solution containing 1.1mM EDTA, 0.067mM mercaptoethanol and 5.5mM cystiene-HCl for 30 minutes.

Technical Notes

Papain should be activated before use to ensure maximum activity. The normal activation buffer is a solution containing 1.1mM EDTA, 0.067mM mercaptoethanol and 5.5mM cysteine-HCl. After 30 minutes in this solution, the enzyme is completely activated.

For a listing of up-to-date enzyme and biochemical citations, go to: http://Worthington-Biochem.com/index/manual.html

Related Products

Cell Isolation Optimizing System • Collagenase • Deoxyribonuclease I • Elastase • Hyaluronidase • Neonatal Cardiomyocyte Isolation Kit Neutral Protease (Dispase®) • Papain (Neural) Dissociation System • Hepatocyte Isolation System • Proteinase K STEMxyme® 1 & 2 Collagenase/Neutral Protease Blends • Trypsin • Trypsin Inhibitors