

Neutral protease (Dispase®) is a non-mammalian animal origin free (AOF) metallo, neutral protease, purified by methods developed at Worthington. Its mild proteolytic action makes the enzyme especially suitable for the preparation of primary cells and secondary (subcultivation) in cell culture since it is gentle on cell membranes. This protease is also used as a secondary enzyme in cell isolation and tissue dissociation applications, commonly used with collagenase.

Description	Activity	Code	Cat. No.	Size
Neutral Protease (Dispase®), Purified Animal Origin Free. Chromatographically purified. A lyophilized powder. Store at 2-8°C.	≥ 4 Units per mg dry weight	NPRO	LS02100	10 mg
			LS02104	50 mg
			LS02108	Bulk
Neutral Protease, Partially Purified Animal Origin Free. Partially purified. A lyophilized powder. Store at 2-8°C.	≥ 0.1 Units per mg dry weight	NPRO2	LS02109	1 gm
			LS02111	5 gm
			LS02112	Bulk

Characteristics of Neutral Protease (Dispase®) from *Bacillus polymyxa*:

Molecular Weight: 36 kda.

pH Optimum: Stable over a wide pH range: 4.0-9.0, optimum pH 5.9-7.0.

Stability/Storage: Stable at 2-8°C for 12 months. Aliquot and store at -20°C after reconstitution with water or commonly used balanced salt solutions or media.

Unit Definition One Unit releases one micromole of Folin positive amino acids, measured as tyrosine, at 37°C, pH 7.5, using casein as the substrate.

Specificity Non-specific cleavage of peptide bonds containing leucine and phenylalanine.

Activators Divalent cations including Ca^{2+} , Mg^{2+} , Mn^{2+} and Fe^{2+}

Inhibitors: EDTA (1mM), EGTA, 1-10-phenanthroline and heavy metals

Application(s): Commonly used to separate skin epidermis from dermis leaving intact epithelial sheets and stem cell, hepatocyte and other cell isolation applications. However, due to the diversity of the variables involved, exact isolation conditions should be determined empirically for each cell/tissue application.

See Worthington's Tissue Dissociation Guide for tissue and cell specific references, searchable at Worthington-Biochem.com utilizing NPRO and other cell isolation enzymes.

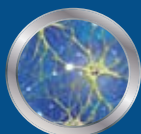
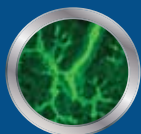
Related Products

Cell Isolation Optimizing System • Collagenase • Deoxyribonuclease I • Elastase • Hepatocyte Isolation System
Hyaluronidase • Neonatal Cardiomyocyte Isolation System • Papain • Papain Dissociation System • Proteinase K
STEMxyme™ 1 & 2 Collagenase/Neutral Protease Blends • Trypsin • Trypsin Inhibitors

(Over)

[2.13]





PRODUCT HIGHLIGHTS



STEMxyme™ 1 & 2 COLLAGENASE/ NEUTRAL PROTEASE BLENDS

Tissue Dissociation/Stem Cell Isolation

NEW! Animal Origin Free Collagenase/Neutral Protease Blends

STEMxyme™ 1 & 2 Collagenase/Neutral Protease (Dispase®) are specialized combinations of Animal Origin-Free *Clostridium histolyticum* collagenase (Code: CLSAFB) and animal origin free *Bacillus polymyxa* neutral protease (Dispase®) with a minimum of 250 CLS units and 1,000 or 2,000 caseinase units per mg dry weight, respectively. Designed for stem cell, regenerative medicine and other primary cell isolations and bioprocessing applications where introduction of potential animal derived pathogens must be prevented.

A detailed description of the Worthington collagenase and contaminant assays can be found in the **Worthington Enzyme Manual**. In addition tissue specific references and detailed isolation conditions can be found in the **Worthington Tissue Dissociation Guide**. Please request your copy or go to **Worthington-Biochem.com** or **TissueDissociation.com**.

Description	Activity	Code	Cat. No.	Size
STEMxyme™1, Collagenase/ Neutral Protease, 0.22 Filtered A specialized combination of Animal Origin-Free <i>Clostridium histolyticum</i> collagenase and Animal Origin-Free <i>Bacillus polymyxa</i> neutral protease with a minimum of 250 CLS units and 1,000 caseinase units per mg dry weight. Designed for stem cell and other primary cell isolations and bioprocessing applications where introduction of potential animal derived pathogens must be prevented. Store at 2-8°C.	≥250 collagenase units per mg dry weight ≥1,000 caseinase units per mg dry weight	STZ1	LS004106 LS004107	50 mg 5 x 50 mg
STEMxyme™2, Collagenase/ Neutral Protease, 0.22 Filtered A specialized combination of Animal Origin-Free <i>Clostridium histolyticum</i> collagenase and Animal Origin-Free <i>Bacillus polymyxa</i> neutral protease with a minimum of 250 CLS units and 2,000 caseinase units per mg dry weight. Designed for stem cell and other primary cell isolations and bioprocessing applications where introduction of potential animal derived pathogens must be prevented. Store at 2-8°C.	≥250 collagenase units per mg dry weight ≥2,000 caseinase units per mg dry weight	STZ2	LS004112 LS004113	50 mg 5 x 50 mg

Related Products

Cell Isolation Optimizing System • Collagenase • Deoxyribonuclease I • Elastase • Hepatocyte Isolation System
Hyaluronidase • Neonatal Cardiomyocyte Isolation System • Neutral Protease (Dispase®) • Papain
Papain (Neural) Dissociation System • Proteinase K • Trypsin • Trypsin Inhibitors

(Over)

[10.13]

730 Vassar Avenue, Lakewood, New Jersey 08701
800.445.9603 • 732.942.1660 • Fax: 800.368.3108 • 732.942.9270

Worthington-Biochem.com

ISO9001 Certified

