CELL ISOLATION OPTIMIZING SYSTEM

Tissue Dissociation/Cell Isolation

Worthington Biochemical Corporation

PRODUCT HIGHLIGHT

Worthington Biochemical Corporation offers a complete method development kit containing an assortment of enzymes most frequently used in tissue dissociation and cell isolation procedures. The **Cell Isolation Optimizing System** includes instructions, references and strategies for the handling, use and optimization of enzymatic cell isolation methods to achieve maximum yield of viable cells. The system is designed to offer versatility in developing a method of obtaining cells from many different tissue types and sources in a cost-efficient manner.

Description	Code	Catalog No.	Size	Price
Cell Isolation Optimizing System A complete method development kit for enzymatic primary cell isolation including enzymes and detailed instructions.	CIT	LK003200	1 Box	$570.00
		Ask about our bulk quantity discounts for educational and training purposes.		

Description and Package Contents

A complete method development kit containing an assortment of enzymes most frequently used in enzymatic tissue dissociation and cell isolation procedures. Includes instructions, references, and strategies for the handling, use and optimization of enzymatic cell isolation methods for maximum yield of viable cells. Contains all enzymes commonly referenced in tissue dissociation and cell isolation procedures. Also contains the Cell Isolation Guide which describes the tissue types commonly used, the mode of action of the various enzymes, tissue culture techniques, and protocol optimization guidelines (with cell and tissue-specific references for getting started in enzymatic cell isolation).

Tissue dissociation and cell harvesting are two principal applications for enzymes in tissue culture research and cell biology studies. Despite the widespread use of enzymes for these applications over the years, their mechanisms of action in dissociation and harvesting are not well understood. As a result, the choice of one technique over another is often arbitrary and based more on past experience than on an understanding of why the method works and what modifications could lead to even better results.

Investigators searching the scientific literature for information on the ideal enzymes and optimal conditions for tissue dissociation are often confronted with conflicting data. Much of the variation stems from the complex and dynamic nature of the extracellular matrix and from the historical use of relatively crude, undefined enzyme preparations for cell isolation applications. The extracellular matrix is composed of a wide variety of proteins, glycoproteins, lipids and glycolipids, all of which can differ in abundance from species to species, tissue to tissue and with developmental stage. The Worthington Cell Isolation Optimizing System provides an assortment of the widely used enzymes in purified form for establishing an optimized cell isolation procedure on a cost-efficient basis.

Kit Contents

Enzyme	Code*	Quantity/Vial
Collagenase Type 1	CLS-1	500 mg dw
Collagenase Type 2	CLS-2	500 mg dw
Collagenase Type 3	CLS-3	500 mg dw
Collagenase Type 4	CLS-4	500 mg dw
Trypsin	TRL	500 mg dw
Hyaluronidase	HSE	50,000 Units
Elastase	ESL	100 mg P
Papain	PAPL	100 mg P
Deoxyribonuclease I	DP	25 mg dw
Neutral Protease (Dispase®)	NPRO	10 mg dw
Trypsin Inhibitor	SIC	100 mg dw

dw = dry weight
P = protein

*** The code which appears in the table for each of the enzymes corresponds to the codes found in our regular price list.**

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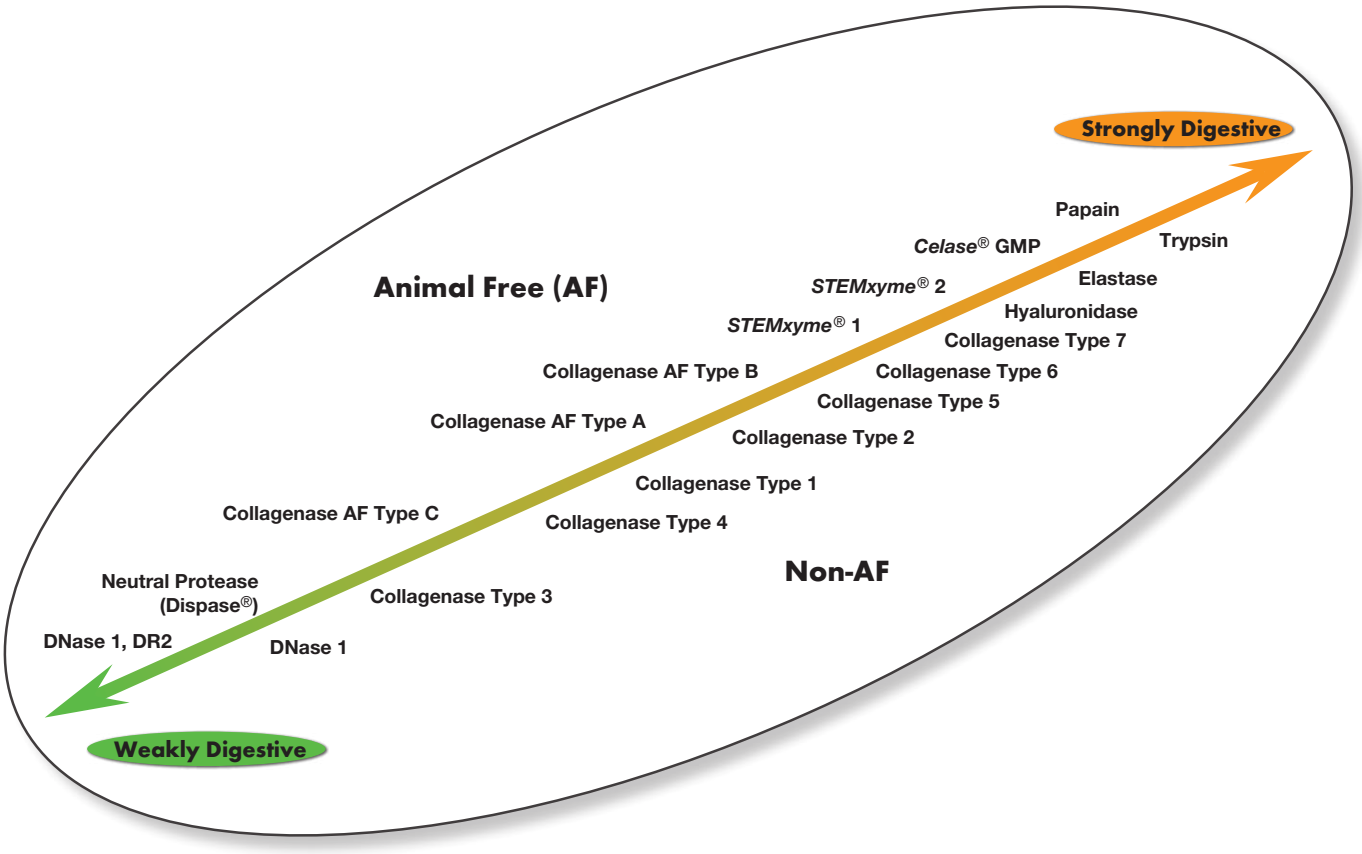
Worthington Primary Cell Isolation Enzyme Digestion Scale



Tissue dissociation/primary cell isolation and cell harvesting are principal applications for enzymes in tissue culture, stem cell research and cell biology studies. The goal of a cell isolation procedure is to maximize the yield of functionally viable, dissociated cells. There are many parameters which may affect the outcome. The choice of enzyme is an important parameter. Worthington's Tissue Dissociation Guide summarizes our knowledge of how these enzymes accomplish the "routine" operations of tissue dissociation and primary cell harvesting. This technical guide describes standard lab procedures; offers a logical experimental approach for establishing a cell isolation protocol; and lists many tissue specific references to aid development of an effective method. For more information, go to: TissueDissociation.com

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

Related Products

Collagenase • Deoxyribonuclease I • Elastase • Hepatocyte Isolation System • Hyaluronidase • Neonatal Cardiomyocyte Isolation System
Neutral Protease (Dispase®) • Papain • Papain (Neural) Dissociation System • *STEMxyme* ® 1 & 2 Collagenase/Neutral Protease Blends
Trypsin • Trypsin Inhibitor

For Product Catalog, Tissue Dissociation Guide and Enzyme Manual, go to: Worthington-Biochem.com