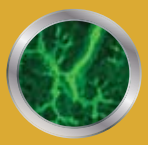

PRODUCT HIGHLIGHTS

Worthington Biochemical Corporation

HEPATOCYTE ISOLATION SYSTEM

Tissue Dissociation/Cell Isolation

Most traditional methods published for isolating hepatocytes use crude and partially purified enzyme preparations including various types of collagenase and other proteases. More recently the use of better characterized preparations of collagenase such as Worthington Types 1 and 4 (CLS-1, 4) have provided better results. All crude collagenase preparations can contain lot-variable contaminating proteases, esterases and other enzymes requiring researchers to pre-screen several lots of enzyme and/or continually modify isolation parameters and protocols.

The Worthington Hepatocyte Isolation System has been developed to provide researchers with a reliable, convenient, and consistent hepatocyte cell isolation system. By using the pre-optimized combination of enzymes contained in this kit, it is possible to minimize the lot-to-lot variation and improve the quality of the isolated hepatocytes. In addition, Worthington use-tests each lot by isolating hepatocytes from adult rat to assure performance, reliability, and consistent yield of viable cells.

The method is based on that described by Berry, M.N., modified by Seglen, P.O. (*Methods in Cell Biology, vol XIII,* David M. Prescott ed., Academic Press, 1976; Chapter 4, "Preparation of Isolated Rat Liver Cells", pp 29-83), and further optimized in conjunction with several researchers.

Description	Code	Size	Cat. No.
Hepatocyte Isolation System	HIS	1 Kit	LK002060
Individual Components			
Enzyme Vials	CLSH	1 vi 5 vi	LK002066 LK002067
DNase Vials	D2	1 vi 5 vi	LK003170 LK003172
10X CMF-Hank's Balanced Salt Solution	HBSS10	500 ml	LK002064
L-15 Media Powder	L15NK	1 x 1L	LK003250
0.15M MOPS Buffer	MOPS	1 x 75 ml	LK002070
7.5% Sodium Bicarb. Solution	NAH	1 x 100 ml	LK002069

Description and Package Contents

The package contains sufficient materials for five separate adult rat liver perfusions or 5-10 adult mouse perfusions. For larger or smaller tissue applications, prepare proportionate volumes of reagents at each step and combine them in the same ratio as described in the protocol.

(Over) [10.13]

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Vial #1: 10X CMF-HBSS Concentrate, 1 bottle, 500ml Sterile calcium and magnesium-free Hank's Balanced Salt Solution (CMF-HBSS). The solution is used for washing and perfusing the liver prior to the addition of the dissociating enzyme solution.

Vial #2: Enzyme Vial 20,000 Units Collagenase and 30 Units Elastase, 5 Vials Worthington collagenase (Code: CLS-1) and elastase (Code: ESL), filtered through 0.22µm pore size membrane, and lyophilized. Before use, reconstitute with the L-15/MOPS solution and swirl gently to dissolve contents as directed in the following procedure. Store unreconstituted vials at 2–8°C.

Vial #3: DNase Vial 1,000 Units DNase I each, 5 Vials Worthington DNase I (Code: D), filtered through 0.22µm pore size membrane, and lyophilized. Before use, reconstitute with L-15/MOPS solution and swirl gently to dissolve contents as directed in the following procedure. Store unreconstituted vials at 2–8°C.

Vial #4: 0.15M MOPS, pH 7.5, 1 bottle, 75ml 0.15M MOPS, pH 7.5 buffer concentrate, used to buffer the reconstituted Leibovitz L-15 media.

Vial #5: 7.5% Sodium Bicarbonate ($NaHCO_3$),1 bottle, 100ml 7.5% Sodium bicarbonate concentrate, used to buffer the diluted CMF-HBSS.

Pouch, containing Leibovitz L-15 Media Powder, 1 x 1L Reconstitute entire contents of pouch by cutting open top of envelope and pouring contents into beaker containing approximately 800ml of cell culture grade water. Rinse pouch 2 - 3 times with an additional 100ml water. Bring total volume to 1000ml and filter through a 0.22 micron pore size membrane.

Related Products

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

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Worthington Tissue Dissociation Guide, Worthington Biochemical Corp., Lakewood, NJ, 2003.

Complete Catalog, Tissue Dissociation Guide and Enzyme Manual available online at:

Worthington-Biochem.com
TissueDissociation.com