

## OsteoAssay™ Human Bone Plate

Real Bone. Better Results.  
High-throughput Analysis of Bone Resorption Activity



Osteoporosis is a metabolic bone disease characterized by the deterioration of bone tissue and low bone mass density leading to bone fragility and risk of fracture. A significant part of osteoporosis research involves the search for new drugs to inhibit osteoclastic bone resorption.

The OsteoAssay™ Human Bone Plate provides the convenience of a high-throughput plate matrix that can be used to quantitatively measure bone resorption.

The OsteoAssay™ Plate provides a thin layer of adherent human bone for the culture of primary human or non-human osteoclasts, osteoclast precursors, and immortalized cell lines. Cells can be stained with standard cytochemical (e.g. TRAP) or immunofluorescent techniques. Assays of bone resorption (e.g. EIA of collagen peptides) and osteoclast precursor differentiation (e.g. TRAP enzyme activity) can be performed easily by sampling the cell culture supernatant.

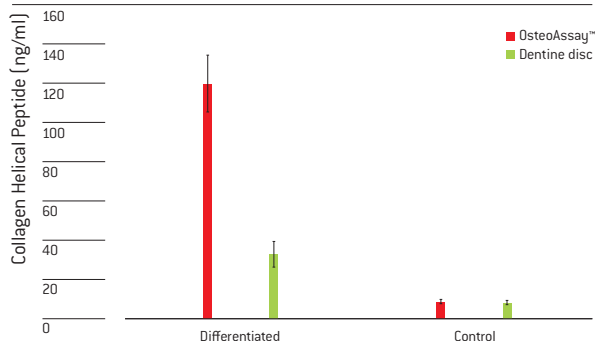
### ■ Applications:

- Bone resorption
- Osteoclast precursor differentiation
- Osteoclast enzymatic activity

### ■ Features:

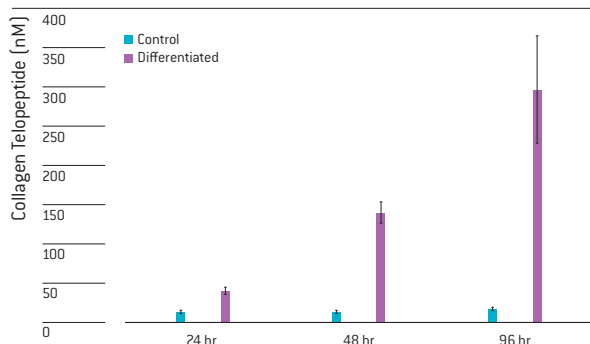
- **Novel** – Contains real human bone for more biologically relevant results
- **Convenient** – Ready-to-use plates with human bone chips attached to wells eliminates the need for dentine or bone slices
- **Simple** – Cells can be seeded onto the surface of the OsteoAssay™ Plate and used in traditional cell culture protocols
- **Flexible** – Can be used with a variety of cell types and cell-based assays

## OsteoAssay™ Plate is superior to dentine slices



Comparison of primary human osteoclast function (*in vitro* bone degradation) when cultured on an OsteoAssay™ Plate vs. dentine slices. Primary human osteoclast precursors were seeded at 10,000 cells/well in the presence of either M-CSF alone (undifferentiated control) or both M-CSF and soluble RANK ligand (differentiated) for 5 days. Media were renewed after 5 days and supernatants were harvested after an additional 1 day of culture and assayed for collagen peptides.

## High signal-to-noise ratio and linear release of collagen peptides with time



The release of collagen peptides from the OsteoAssay™ Plate by differentiated primary human osteoclasts is linear with time. Primary human osteoclast precursors were seeded onto an OsteoAssay™ Plate at 10,000 cells/well and cultured in medium containing M-CSF +/- soluble RANK ligand. After 5 days of culture, the medium was renewed. Samples of supernatant were harvested after an additional 24, 48 and 96 hours and used in an EIA assay for the telopeptide.

## Ordering Information

### OsteoAssay™ Human Bone Plate

Cat. No.	Description	Size
PA-1000	OsteoAssay™ Human Bone Plate	96-well strip well plate

### Related Products

Cat. No.	Description	Size
2T-110	Human Osteoclast Precursors	>1 million cells
PT-8001	OCP-Osteoclast Precursor BulletKit®	Includes basal medium and supplements for growth and differentiation of primary human osteoclast precursors
CC-2538	NH0st-Osteoblasts, in OGM™	>500,000 cells
CC-3207	OGM™ Osteoblast Growth Medium BulletKit®	Includes basal medium and supplements for growth of normal human osteoblasts
PT-2501	hMSC Mesenchymal Stem Cells	>750,000 cells
PT-3001	MSCGM™ Mesenchymal Stem Cell Growth Medium BulletKit®	Includes basal medium and supplements for growth of mesenchymal stem cells
PT-3002	hMSC Mesenchymal Stem Cell Osteogenic Differentiation BulletKit®	Includes basal medium and supplements for growth of mesenchymal stem cells and differentiation into osteoblasts

For more information about the OsteoAssay™ Human Bone Plate, please contact your Lonza Sales Specialist.

## Contact Information

### North America

Customer Service: 800-638-8174  
 Scientific Support: 800-521-0390  
 E-mail: scientific.support@lonza.com  
 Online Ordering: www.lonza.com

### Europe

Customer Service: 00 32 87 321 611  
**Cell Discovery**  
 Scientific Support: 00 49 221 99199 400  
 E-mail: scientific.support.eu@lonza.com  
**Molecular Biology, RTS & Media**  
 Scientific Support: 00 32 87 321 611  
 E-mail: scientific.support.eu@lonza.com  
 Online Ordering: www.lonza.com

### International

Contact your local Lonza Distributor  
 Customer Service: 301-898-7025, ext. 2322  
 Fax: 301-845-8291  
 E-mail: scientific.support@lonza.com

### International Offices

Australia	61 3 9550 0883
Austria	0800 201 538
Belgium	00 32 87 321 611
Brazil	55 11 2069 8800
Denmark	45 43 56 74 00
France	0800 91 19 81
Germany	0800 182 52 87
India	91 22 4342 4000
Italy	0039 0363 45710
Japan	81 3 5566 0612
Poland	48 22 833 87 45
Singapore	65 64914214
Spain	34 902 531 366
Sweden	020 140 4410
Switzerland	0800 83 86 20
The Netherlands	0800 022 4525
United Kingdom	44 118 979 5234

Lonza Walkersville, Inc.  
 Walkersville, MD 21793

For Research Use Only. Not for use in diagnostic procedures.

Unless otherwise noted, all trademarks herein are marks of the Lonza Group or its affiliates.

© Copyright 2009, Lonza Walkersville, Inc. All rights reserved.  
 TS-PA-1000 03/09

# Lonza