

OsteoLyse™ Assay Kit (Human Collagen)

Measure Bone Matrix Resorption in Minutes



The OsteoLyse™ Assay Kit provides an easy-to-use protocol for quantitatively measuring *in vitro* osteoclast-mediated bone matrix resorption in a high-throughput homogeneous format. The kit includes a 96-well cell culture plate coated with europium-labeled human collagen, a 96-well fluorescence assay plate and a bottle of Fluorophore Releasing Agent. Osteoclasts can be seeded onto the OsteoLyse™ Plate using traditional cell culture protocols. The assay directly measures the release of europium-labeled collagen fragments into the osteoclast cell culture supernatant via time resolved fluorescence, indicating resorption activity levels.

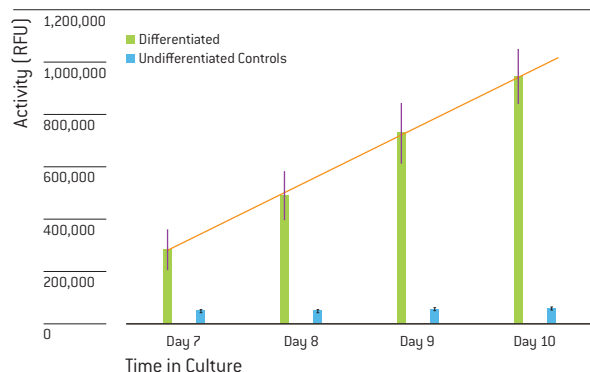
■ Research Applications:

- Osteoporosis
- Bone resorption
- Osteoclast precursor differentiation
- Mature osteoclast enzyme activity
- Cancer research: metastasis/collagen degradation

■ Features:

- **Homogeneous** – Obtain results in one step by sampling the supernatant (supports high and low throughput applications)
- **Convenient** – Ready-to-use plates with human collagen bound to wells and assay reagents combined in one kit; no antibodies are required
- **Easy to use** – Cells can be seeded onto the surface of the OsteoLyse™ Plate as per traditional cell culture protocols
- **Flexible** – Can be used with cell lines and primary cells
- **Cost Effective** – Much less expensive than existing ELISA kits on the market which do not include a bone or collagen substrate

Human Osteoclast Activity Measured by Collagen Peptide Release Using the OsteoLyse™ Assay Kit



Poietics® Human Osteoclast Precursors were seeded onto an OsteoLyse™ Plate at 10,000 cells/well and differentiated with M-CSF and soluble RANK ligand. At days 7, 8, 9 and 10 of culture, 10 µl of supernatant was removed and counted. The blue bars represent counts obtained when the precursors were cultured with M-CSF only.

For more information about the OsteoLyse™ Assay Kit, 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

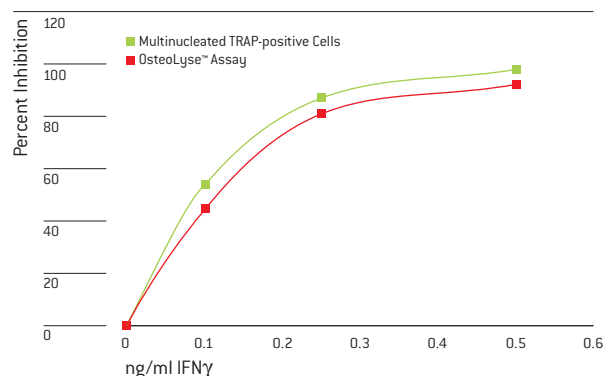
Fax: 301-845-8291

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International Offices

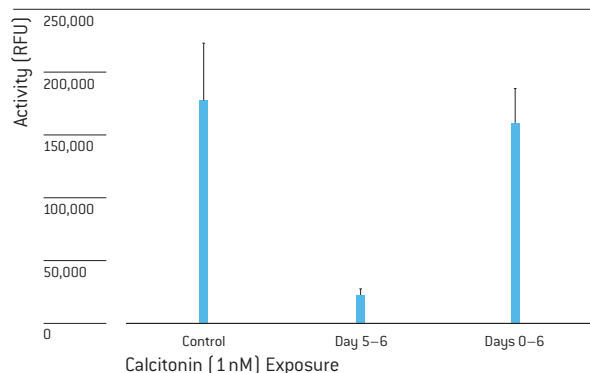
Australia	61 3 9550 0883
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Belgium	00 32 87 321 611
Brazil	55 11 2069 8800
Denmark	45 43 56 74 00
France	0800 91 19 81
Germany	0800 182 52 87
India	91 22 4342 4000
Italy	0039 0363 45710
Japan	81 3 5566 0612
Poland	48 22 833 87 45
Singapore	65 64914214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

Comparison of the TRAP Stain and the OsteoLyse™ Assay Kit in an Assay of Interferon γ -inhibition of Osteoclast Precursor Differentiation



Poietics® Human Osteoclast Precursors were cultured in medium containing soluble RANK ligand +/- interferon γ . After 9 days, cell culture supernatants were assayed for fluorescent collagen peptides as per the OsteoLyse™ Assay Kit instructions. Data are expressed as percent inhibition relative to no interferon controls.

Inhibition of Bone Matrix Resorption by Calcitonin as Assayed in the OsteoLyse™ Assay Kit



Poietics® Human Osteoclast Precursors were seeded onto an OsteoLyse™ Plate at 10,000 cells/well and cultured in differentiation medium containing no calcitonin, calcitonin added only at day 5 and calcitonin added on days 0 and 5. Ten µl samples of supernatants were counted after a total of 6 days. Calcitonin, added at day 0, resulted in the osteoclasts becoming refractory to calcitonin added on day 5.

Ordering Information

OsteoLyse™ Assay Kit

Cat. No.	Description	Size
PA-1500	OsteoLyse™ Assay Kit (Human Collagen)	Kit includes 96-well plate with collagen, Fluorophore Releasing Reagent, and 96-well assay plate

Related Products – Bone-related Cell Systems (Must be purchased separately)

Cat. No.	Description	Size
2T-110	Osteoclast Precursors	≥1 million cells
PT-8001	OCP-Osteoclast Precursor BulletKit®	Includes basal medium and supplements for growth and differentiation of primary human osteoclast progenitors

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