BONE RESORPTION ASSAY PLATE 24
BONE RESORPTION ASSAY PLATE 48

This product is a calcium phosphate (CaP)-coated 24-well or 48-well plate used to measure the bone resorption activity of osteoclasts. The plate is coated with a synthetic CaP (carbonate apatite), similar to that of natural apatite, which is able to be used as an alternative to dentin discs.

1) Specifications

(A) BONE RESORPTION ASSAY PLATE 24:

A 24-well plate coated with a synthetic CaP (carbonate apatite) (1 plate, gamma sterilized)

(B) BONE RESORPTION ASSAY PLATE 48:

A 48-well plate coated with a synthetic CaP (carbonate apatite) (1 plate, gamma sterilized)

2) Example of use

(1) **A:** Wash each well of the 24-well plate with 1 mL of culture medium.
B: Wash each well of the 48-well plate with 0.5mL of culture medium.

(2) Inoculate RAW264 or RAW264.7 cells into each well in culture medium (DMEM/F-12 or αMEM containing 10% FBS). Add an inducer of osteoclastic differentiation, such as RANKL (100 ng/mL) and the test substances to be evaluated.
A: 24-well plate $1x10^4$ cells/mL; 1 mL/well
B: 48-well plate $5x10^3$ cells/mL; 0.5mL/well

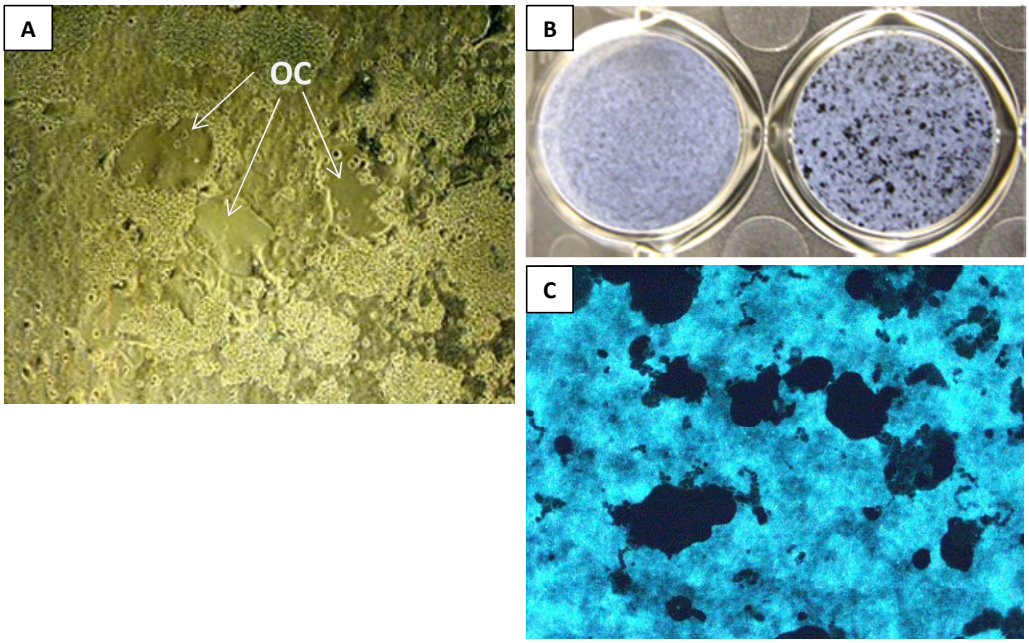
(3) On day 3, change the medium with freshly made medium (containing RANKL and drugs). This step may be eliminated. However, the induction of osteoclastic differentiation by RANKL would be reduced.

(4) On day 5 or 6, remove the conditioned medium from each well and treat the wells with 5% sodium hypochlorite for five minutes. After washing the plate with water and then drying it, photograph the regions in each well using a microscope and measure the pit area with image analyzing software.

3) Assay precautions

(1) To stimulate cells, we recommend a RANKL concentration ≥ 100 ng/mL.
(2) This product is for research use only, and not for use in diagnostic or therapeutic procedures.

4) Expected Results



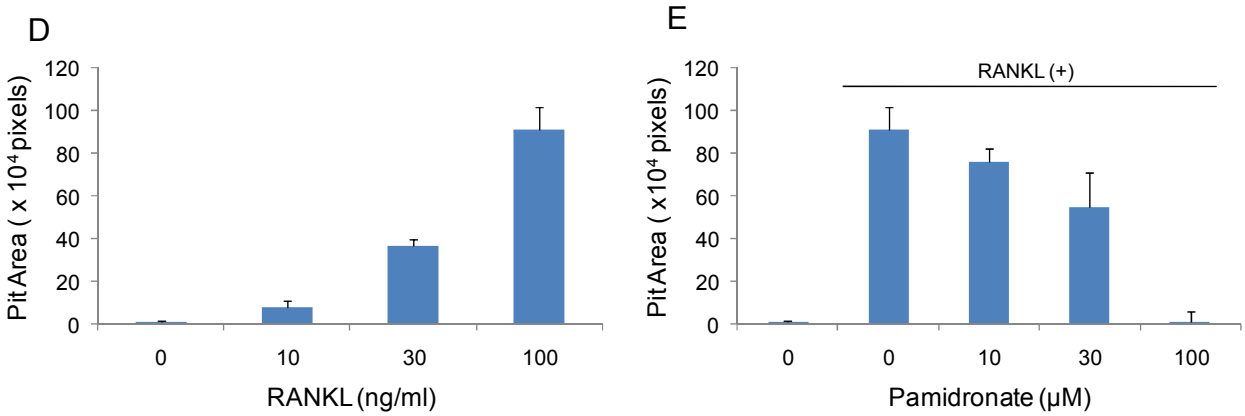
UK & Rest of World
184 Milton Park, Abingdon
OX14 4SE, Oxon, UK
Tel: +44 (0) 1235 828 200
Fax: +44 (0) 1235 820 482

Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
Tel: +41 (0) 91 604 55 22
Fax: +41 (0) 91 605 17 85

Deutschland
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
Tel: +49 (0) 69 779099
Fax: +49 (0) 69 13376880

North America
23591 El Toro Rd, Suite #180
Lake Forest, CA 92630
Tel: + 1 800 987 0985
Fax: + 1 949 265 7703

amsbio
info@amsbio.com
www.amsbio.com
AMS Biotechnology



A. A phase-contrast micrograph of RAW264 cells (day 6) cultured in CaP-coated plates stimulated with RANKL (Oriental Yeast Co., Ltd.,Tokyo, Japan; 100 ng/mL). Osteoclast-like cells (OC) were observed.
B. Photograph of the plate after removing cells. Pits can be observed macroscopically (Left: without RANKL; Right: with RANKL).
C. Micrograph of the pits in a CaP-coated plate (with RANKL).
D. RANKL-dependent increase of the pit area (mean ± S.D., n = 3).
E. The inhibitory effect of the bisphosphonate, Pamidronate, on CaP resorption induced by RANKL (100 ng/mL).

#20131009

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