



BONE RESORPTION ASSAY PLATE

(24well 48well 96well)

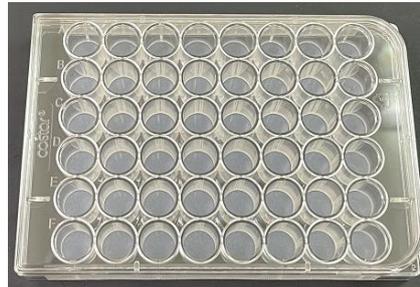
This product is a calcium phosphate (CaP)-coated plate used to measure the bone resorption activity of osteoclasts. The plate is coated with a synthetic CaP (carbonate apatite), similar to that of natural apatite, which is able to be used as an alternative to dentin discs.

1) Specifications

- (A) A 24-well plate coated with a synthetic CaP (gamma sterilized, Cat.CSR-BRA-24P)
- (B) A 48-well plate coated with a synthetic CaP (gamma sterilized, Cat.CSR-BRA-48P)
- (C) A 96-well plate coated with a synthetic CaP (gamma sterilized, Cat.CSR-BRA-96P)



A: CSR-BRA-24P



B: CSR-BRA-48P



C: CSR-BRA-96P

2) Example of use

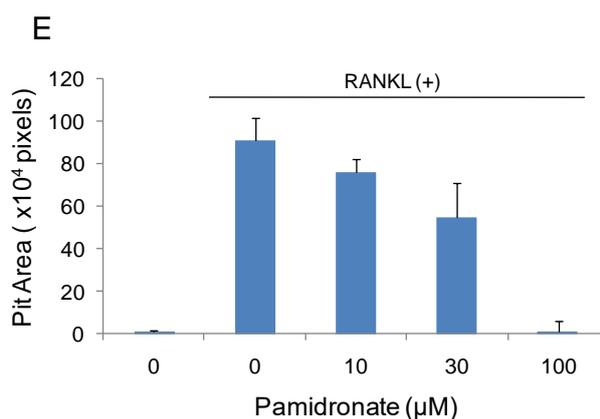
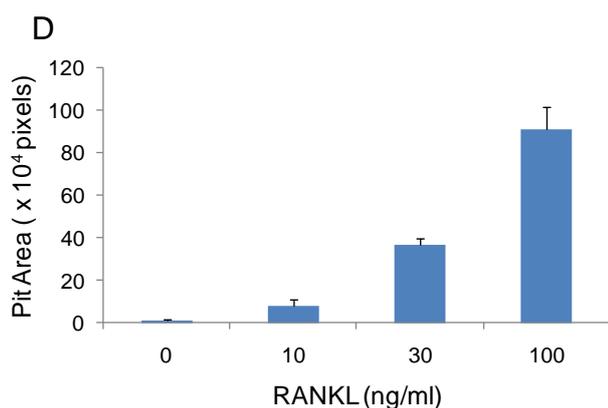
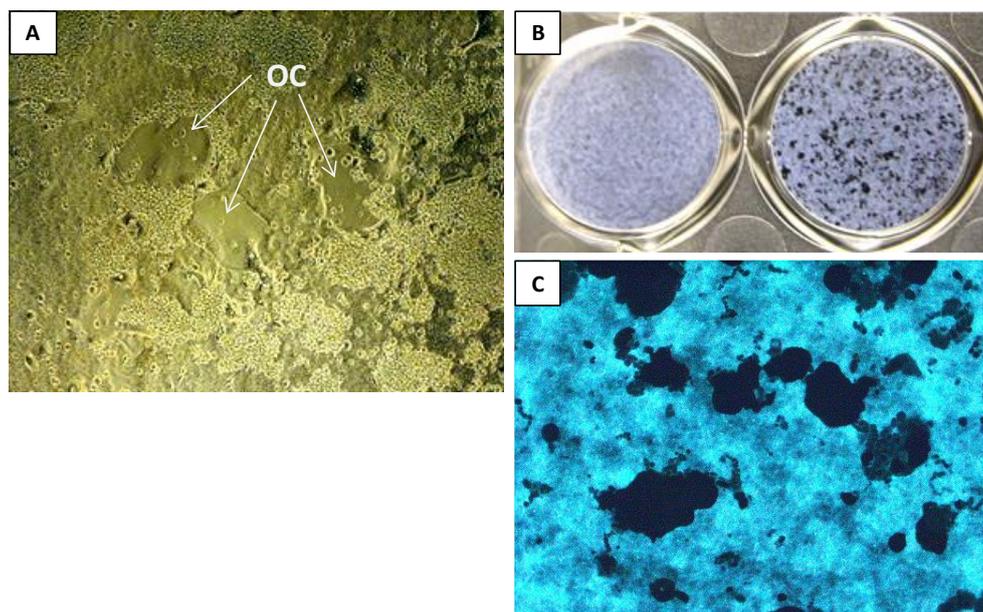
- (1) **A:** Wash each well of the 24-well plate with 1 mL of culture medium.
B: Wash each well of the 48-well plate with 0.5mL of culture medium.
C: Wash each well of the 96-well plate with 0.2mL of culture medium.
- (2) Inoculate RAW264 or RAW264.7 cells into each well in culture medium (DMEM/F-12 or MEM α 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 1x10⁴ cells/mL; 1 mL/well
B: 48-well plate 5x10³ cells/mL; 0.5mL/well
C: 96-well plate 2x10³ cells/mL; 0.2mL/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 3-5 minutes (Do not leave the plate for more than 5 minutes in the 5% sodium hypochlorite). 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 \geq 100 ng/mL.
- (2) This product is for research use only, and not for use in diagnostic or therapeutic procedures.



4) Expected Results



- 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 \pm S.D., n = 3).
- E. The inhibitory effect of the bisphosphonate, Pamidronate, on CaP resorption induced by RANKL (100 ng/mL).

20230310

Manufactured by **PG**
Research



COSMO BIO Co., LTD.

【JAPAN】
TOYO EKIMAE BLDG. 2-20, TOYO 2-CHOME,
KOTO-KU. TOKYO 135-0016, JAPAN
Phone: +81-3-5632-9610
FAX: +81-3-5632-9619
URL: <https://www.cosmobio.co.jp/>



COSMO BIO USA

【Outside Japan】
2792 Loker Ave West, Suite 101
Carlsbad, CA 92010, USA
email: support@cosmobiousa.com
Phone/FAX: (+1) 760-431-4600
URL: www.cosmobiousa.com