**Bovine cortical bone slices**

**Description:** Bovine cortical bone slices for osteoclast resorption assays

**Dimensions:** Diameter 6 mm and thickness 0.4 mm (for 96-well plates)

**Package:** 100 bone slices in a transparent plastic bottle

**Storage:** The bone slices are shipped at room temperature in 70% ethanol. Upon arrival the bone slices should be stored at 4°C until use.

**Use:** The bovine cortical bone slices are designed for osteoclast pit/resorption assays performed in 96-well plates.

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**Recommended procedure:**

Reconstitute the bone slices with media before initiating the pit assay. Mature or premature osteoclast either generated from peripheral blood monocytes (PBMC) or co-cultures can be plated on the bone slices. Dependent on the maturation state of the osteoclasts and the factors present, resorption pits will appear after 3-14 days. The number of osteoclasts present can be visualized by its TRAcP activity and counted, before the bone slices are cleaned and toluidine blue stained to visualize the resorption pits (see figure 2). The primary output from this pit assay is the resorbed area.

**Relevant literature:**

Søe K and Delaisse JM. J Bone Miner Res. 2010;25(10):2184-92

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Figure 1: Illustration of bone slice

Figure 2: Bovine cortical bone slides cultured with or without human osteoclast for 3 days. Osteoclastic bone resorption result in the formation of resorption pits, which can be used to monitor the resorption of the cultured osteoclasts.