

Bone Slices



Instructions For Use

Product Name

Bone Slices

REF

DT-1BON1000-96

1. Intended Use

Not for use in clinical or diagnostic procedures.

Bone slices are for accurate *in vitro* assessment of osteoclastic bone resorption either by traditional staining methods or by use of the CrossLaps® for Culture ELISA. Results are to be used for performance evaluation / investigational / research use only.

2. Summary and Explanation


Bone is a dynamic tissue that is remodelled through life. It is believed that special factors are present in bone, which may affect the activity of osteoclast which increases the importance of selecting high quality bone for research applications.

The ability of osteoclasts to make pits within the bone slice can be tested by the human osteoclastic resorption assay¹. A correlation of quantification of osteoclastic resorption either by the traditional staining of resorption pits or assayed as the degradation products of the resorption process by the Crosslaps® for Culture ELISA has been documented².

3. Warnings and Precautions

The Bone Slices are for research use only and is not for internal use in humans or animals. Immunodiagnostic Systems Limited (IDS) will not be held responsible for any loss or damage (except as required by statute), howsoever caused, arising out of non-compliance with the instructions provided.

Materials of animal origin:

 Material of animal origin used in the preparation of this kit has been obtained from animals certified as healthy. The bovine protein has been obtained from countries not infected by BSE. Handle kit reagents as if capable of transmitting an infectious agent. Appropriate precautions and good laboratory practice must be used in the storage, handling and disposal of the kit reagents. Disposal of kit reagents should be in accordance with local regulations.

Classification according to Regulation (EC) CLP:

This product has no classification under CLP.

4. Shelf Life and Storage Of Reagents

The bone slices are stored in 70% ethanol at 4°C.

However, for shorter time periods and during transport room temperature is adequate for retaining the quality of the bone slices.

5. Features

In contrast to pit staining and scoring the use of Crosslaps® for Culture ELISA does not require termination of the osteoclast culture. Thus, several samplings can be obtained from the same bone slice, allowing for e.g. reversibility measurement of osteoclast activity in response to given compounds.

6. Materials

The bone slices are made from the cortical part of the femur of bovine bones and is perfectly fitted for the 96 well format. The bone slices are 6 mm in diameter and 400 – 650 µm thick.

7. Handling

It is recommended that the bone slices are washed 3 times in 10% serum containing medium before they are transferred to the 96 well plates.

8. Culture

Usually resorption experiments lasts 72 hours; however, studies have indicated that significant differences can be observed within 16 – 24 hours following addition of compound to osteoclast cultures. This time can be reduced to as little as 8 hours in optimised assays.

9. Quality Control

Each batch of bone slices is tested for quality by resorption assays for verification of osteoclastic ability to make pits on these exact bone slices. Subsequently, the supernatant is measured by the Crosslaps® for Culture ELISA [AC-07F1] kit and only if both tests are positive the bone slices are accepted for further resorption assays.

10. Waste Management

The material is disposed of as normal cell culture material.

All materials that have come into contact with samples and reagents must be disposed of in accordance with country, state and local regulations.

11. Symbols Used

REF	Catalogue Number
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12. Revision Identifier

Additions or changes to the IFU are indicated by grey highlighting.

13. Product Complaints and Technical Support

The manufacturer can be contacted through their customer service or technical support team. The contact details can be found on the company website: www.idsplc.com.

14. Bibliography

1. Karsdal MA, Henriksen K, Sørensen MG, *et al.* Acidification of the osteoclastic resorption compartment provides insight into the coupling of bone formation to bone resorption. *Am J Pathol.* 2005 Feb;166(2):467-76. doi: 10.1016/S0002-9440(10)62269-9. PMID: 15681830; PMCID: PMC1602325.
2. Schaller S, Henriksen K, Sveigaard C, *et al.* The chloride channel inhibitor NS3736 [corrected] prevents bone resorption in ovariectomized rats without changing bone formation. *J Bone Miner Res.* 2004 Jul;19(7):1144-53. doi: 10.1359/JBMR.040302. Epub 2004 Mar 1. Erratum in: *J Bone Miner Res.* 2004 Aug;19(8):1378. PMID: 15176998.



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