Reconstructed Bone Marrow (rBone™)

Acute myelogenous leukemia (AML)

rBone™ Basic 3D Matrix Pack — **Cat. #10013**

Kit contents: *rBone™* matrix
rEndosteum™ matrix

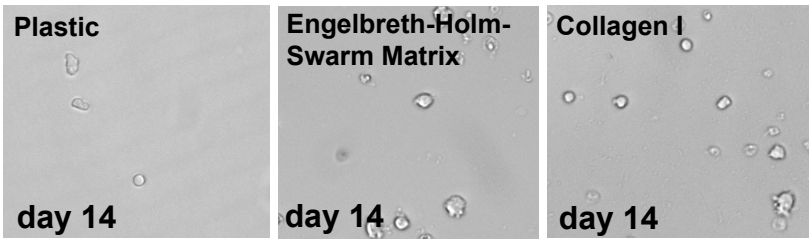
rBone™ 3D Bioassay — **Cat. #10014**

Kit contents: *rBone™* matrix
rEndosteum™ matrix
rBone™ cocktail
AML supplement
Cell Resuspension solution
Cell Isolation solution

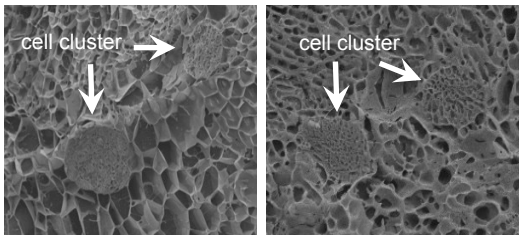
Description:

Reconstructed Bone Marrow (*rBone™*) platform recapitulates the comprehensive 3D microenvironment of the **human** bone marrow (both cellular, hematopoietic and stromal, and extracellular, soluble factors and extracellular matrix (ECM), compartments). In *rBone™*, the malignant clone and the entire complement of the bone marrow stroma (osteoblasts, osteoclasts, adipocytes, and stromal cells) undergo robust expansion while retaining the composition and 3D architecture of *in vivo* tissue. ***rBone™* maintains primary bone marrow cells for at least 21 days without loss of viability**, and as such provides a unique platform to predict long-term effects and efficacy of new therapeutics under physiological conditions of human tissue microenvironment.

Conventional non-physiological environment:
poor survival & lack of proliferation of primary AML cells

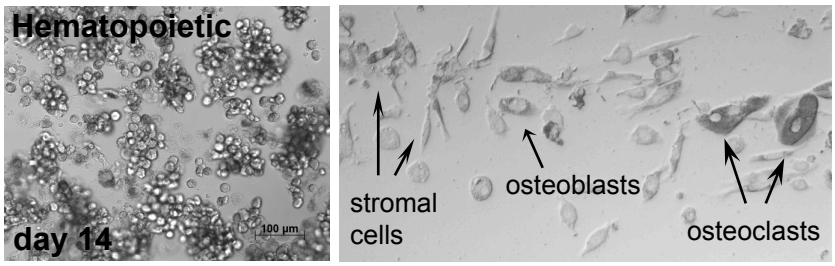


***rBone™* retains *in vivo* architecture**

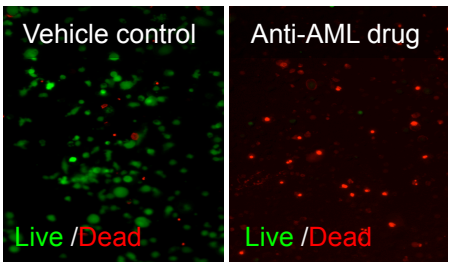


rBone™ 3D Bioassay:

robust long-term (>21 days) survival and proliferation of AML cells



Evaluation of drug response



Applications:

Basic 3D Matrix Pack:
- cell-cell interactions
- cell-ECM interactions
- tumor-stroma interactions
- cell-cytokine/growth factor interactions

Bioassay:
Basic Pack applications, plus:
- drug testing
- drug-resistance
- immuno-oncology; CAR-T cells
- cancer stem cells
- toxicity

Compatible with:

- microscopy
- flow cytometry
- nucleic acid/ protein analysis
- genomics
- proteomics
- *in vivo* studies

Formats:

- fresh or frozen specimens
- can be set up in 6, 12, 24, 48, and 96, and 384-well tissue culture plates

Background references:

1. Isidori A, *et.al.* The Role of the immunosuppressive Microenvironment in Acute Myeloid Leukemia Development and Treatment. 2014. *Expert Rev Hematol.* 7(6):807-18.
2. Tabe Y, Konopleva M. Role of Microenvironment in Resistance to Therapy in AML. 2015. *Curr Hematol Malig Rep.* 10(2):96-103.
3. Geyh S, *et.al.* Functional Inhibition of Mesenchymal Stromal Cells in Acute Myeloid Leukemia. 2015. *Leukemia.* 10.1038/leu.2015.325 [Epub ahead of print].

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Ordering information*

To place an order, please contact us **orders@ixchelsci.com**

***rBone™* Basic 3D Matrix Pack (1ml)** [1]	**Cat. #10013-1ML**	**$322**
***rBone™* Basic 3D Matrix Pack (5ml)** [1,2]	**Cat. #10013-5ML**	**$1288**
***rBone™* Basic 3D Matrix Pack (10ml)** [1]	**Cat. #10013-10ML**	**$2342**

Kit contents: *rBone™* matrix
rEndosteum™ matrix

***rBone™* 3D Bioassay (5ml)** [1,2,3]	**Cat. #10014-5ML**	**$1589**

Kit contents: *rBone™* matrix
rEndosteum™ matrix
rBone™ cocktail
AML supplement
Cell Resuspension solution
Cell Isolation solution

[1]Volume is listed for *rBone™* matrix. All other kit components are provided in equivalent amounts.

[2]*rBone™* (5ml) equivalent of the Basic 3D Matrix Pack and 3D Bioassay provide materials to set-up 1.5 96-well plates or one 48-, 24-, 12-, or 6-well plate

[3]Bioassay is available in a single *rBone™* volume equivalent of 5ml

*For a 20% academic discount, please request a quote at **orders@ixchelsci.com**

Patent pending. **For Research Use Only**; not intended for diagnostic or therapeutic use.

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