Precision-Cut Lung Slices

Predictive Drug Discovery Services

biopta
A REPROCELL BRAND

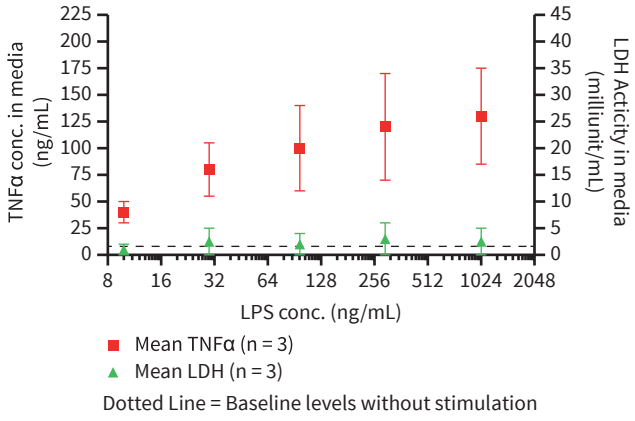
Human and animal lung slices: a phenotypically-accurate functional assay system for screening and target validation

Overview

Precision-cut lung slices (PCLS) are increasingly in demand for the testing of xenobiotics, chemicals and cosmetics. By retaining both the structural and functional integrity of human or animal lungs, the method combines throughput with relevance, offering a phenotypically-accurate model of lung behaviour.

Moreover, REPROCELL's unique access to healthy and diseased lung allows it to investigate drug effects in patients with COPD or asthma. Cross-species comparisons also allows the translation of preclinical animal data to the human situation to be assessed.

Mean Data – LPS Stimulation of PCLS



Dotted Line = Baseline levels without stimulation

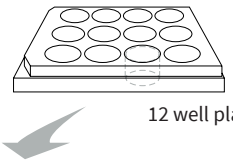
PCLS: a flexible and cost-effective assay offering a range of endpoints and good throughput

REPROCELL will work with you to design a protocol that meets your requirements. Our expert scientific team is on-hand to discuss the range of applications of PCLS.

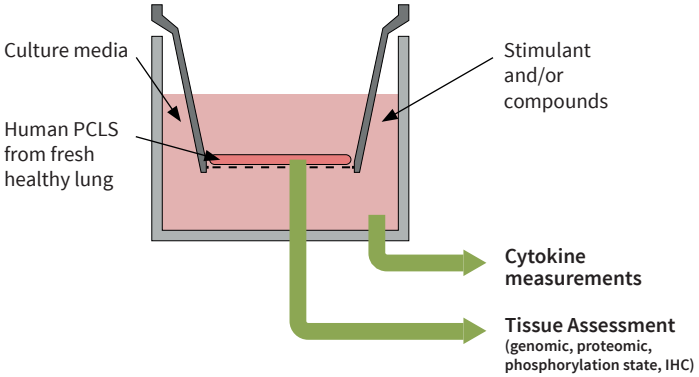
Precision-cut lung slices

- Slices can be kept in culture for up to 7 days
- Dozens of slices can be created from each donor or animal lung
- The effect of test compounds on biomarker release, structural integrity, tissue viability or inflammatory processes can be evaluated
- Customised protocols to meet your needs

Corning Netwell



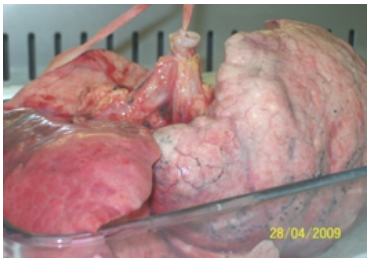
12 well plate



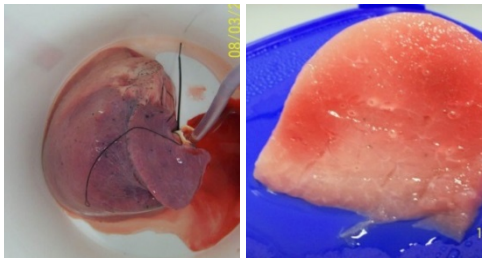
Speak to an expert

Discuss a customized solution with our scientists – email our experts today

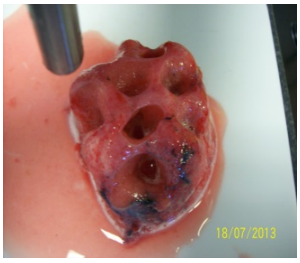
info-emea@reprocell.com



Whole diseased or healthy lungs available

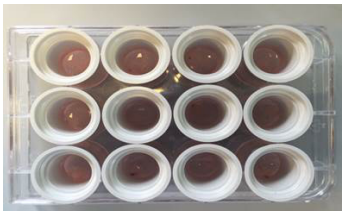


Tissue is stabilised by perfusion of agarose through the airways, prior to slicing



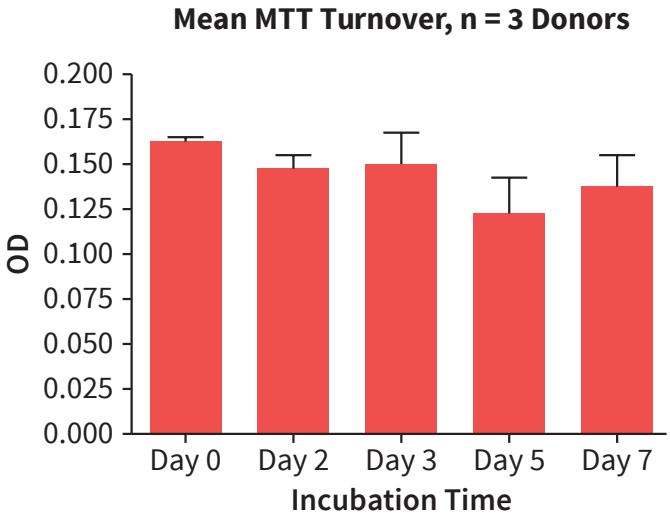
Cores are taken through the tissue

Precision-cut slices (250 or 500 µm thickness) are generated using a Krumdieck tissue slicer



Slices are placed on a mesh in culture medium for up to 7 days

Slices remain viable in culture for up to 7 days as shown by histology (Masson's trichrome) and MTT turnover.



Benefits of Human Fresh Tissues

- Phenytypically-accurate intact human tissues can retain the normal cell population, cell-cell interactions and extracellular matrix needed to reflect human biology
- REPROCELL (formerly Biopta) assesses ethically sourced human materials; established in 2002, work with a trusted human tissue laboratory
- Data generated in fresh human tissue adds commercial value and de-risks development projects