LifeNet Health® LifeSciences

Our Extensive Liver Tissue Library Offers Many Benefits

Increasingly, use of human tissues is becoming a must-have in biomedical research during every stage of the drug discovery pipeline. This is a fundamental shift that can help us develop safer, more effective treatments, as well as a deeper understanding of disease processes. Still, accessing high-quality human tissue can be challenging for many researchers. Issues can include a lack of background data for donors and inconsistencies in tissue recovery and processing techniques.

LifeNet Health LifeSciences can help researchers overcome many of these barriers. We offer an unmatched library of human liver tissue samples based on our extensive donor pool. This gives us several advantages, including comprehensive donor histories and standardized processes that ensure consistency in authorization, recovery and processing. LifeSciences leverages LifeNet Health's 40-year history of developing state-of-the-art organ and tissue transplant technologies. We apply those protocols at every stage – including recovery, handling, transport, and processing – to ensure the highest tissue quality for all our preclinical research samples.

We also offer healthy and diseased tissues, representing various stages of non-alcoholic fatty liver disease, including non-alcoholic steatohepatitis. Researchers can get matched sets of liver cells and tissue samples from the same donor. With fewer worries about having enough samples from a single source to complete your project, these donor-matched sets can enhance many studies. Donor-matched sets can include primary human hepatocytes, stellate cells, Kupffer cells, liver endothelial cells, and tissue samples.

Our liver cells and tissue products come in two primary forms:

- Formalin-fixed paraffin-embedded (FFPE) samples, which are ideal for biomarker expression studies. This tissue is fixed in formaldehyde, also known as formalin, for preservation. Then it's embedded in an immunohistochemical-grade paraffin wax block to make it easier to cut into the required size for study and examination. The process preserves the proteins and structure, allowing for an extended shelf life that enables the samples to be archived and reused. FFPE comes as whole blocks. They can be stored at room temperature.
- Snap frozen tissue (SFT) samples, which are ideal for nucleic acid and protein isolation for genomic and proteomic analysis. This tissue is flash-frozen to rapidly lower the temperature, ensuring stability and quality. Proteins are preserved in their native state. SFT samples must be stored at less than -80 degrees Celsius.

Every LifeNet Health LifeSciences tissue sample comes with detailed donor demographics, along with complete medical and social histories. Information provided includes alcohol and tobacco use; infectious disease results; medication use; cause of death; blood type; and more. Every tissue also features a histopathological assessment performed by a board-certified pathologist. This includes H&E and trichrome-stained images as well as non-alcoholic fatty liver disease activity scores.

When it comes to human tissue samples, quality and consistency are key. Researchers can take advantage of the many benefits of our extensive liver tissue library to move forward with confidence as primary cells become increasingly important for advanced biomedical research.

Learn more about our primary human liver cells and tissue.

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