What makes the ordinary …

eXtraordinary …

the X Factor

The X Factor in

EXperience

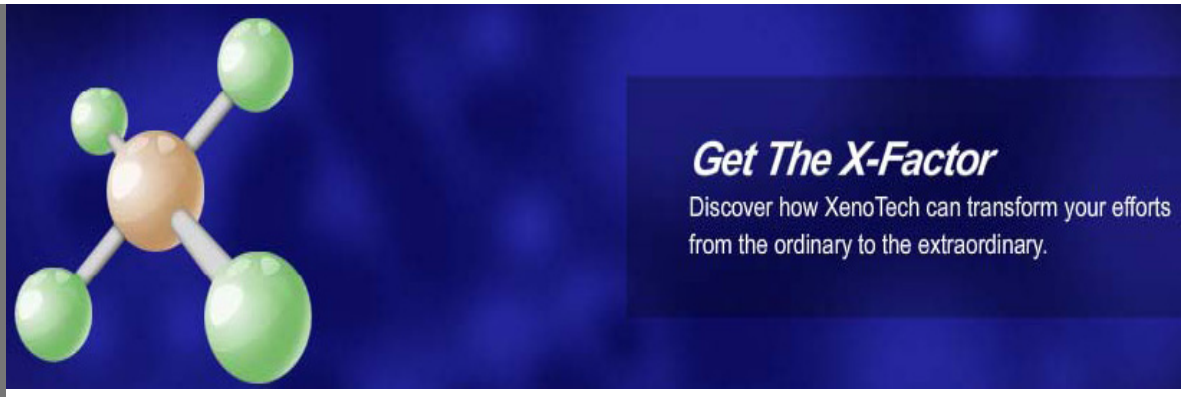
EXcellence

EXpertise

EXpedience

Xenotech LLc, USA is a leading world player for ADMET products.

Xenotech LLc is now part of Sekisui, Japan



Microsomes & Hepatocyte Testing Systems

XTreme 200

XTreme 200
Pooled Human Liver Microsomes :

- 100 male, 100 female
- Km, Vmax and intrinsic clearance provided for each CYP
- CYP activities determined with validated LC-MS/MS methods under uniform conditions
- Study Manager, Study Director and QC review of data
- S9 fraction and cytosol available from same donor pool
- Large lots with reserve tissue from all 200 donors allow long-term availability

ADVANTAGES of CryoXTreme products:
Minimize lot-to-lot variance
Pooled products have lower lot-to-lot variance than individual donor samples, assuring more consistent results.

Maximize Availability
Xenotech production procedures allow them to handle large amounts of materials to produce these products. Larger lots allow test system

CryoXTreme
Pooled Cryopreserved Human Hepatocytes:

In many cases experiments require pooled samples, but the logistics of human tissue and the labor involved in pooling multiple Cryopreserved individual donor hepatocytes make pooled test systems an interesting challenge.

Xenotech has devised pre-pooled Cryopreserved human hepatocytes with multiple pool sizes including 5, 10 and the largest donor mix offered, 50 donor pools.

CryostaX

CryostaX™ is the largest multi-donor pool available prepared using a *single-freeze* process.

Pooled human hepatocytes are a preferred test system in many drug discovery and development applications. Like other pooled human hepatocytes, this pool of 10 provides you with a representative population sample for predictable results; however, our unique process allows pooling after only one freeze.

Availability of large lots assures long-term reliable results. Each vial contains one pellet (100uL each) of each donor (n=10). Each individual is significantly represented in the final preparation. Assured minimum yield (AMY) is 5 million cells per vials. We recommend you use our Hepatocytes isolation kit [K2000] for the best results.

A Unique Approach to Pooled Hepatocytes
Pooled human hepatocytes are a preferred test system in many drug discovery and development applications. Like other preparations of human hepatocytes, this pool of 10 provides you with a representative population sample for predictable results; however, our unique process allows pooling after only one freeze; limiting damage to the hepatocytes.

Cells sustain cryoinjury when they transverse an intermediate temperature zone from -15 to -60°C, first during the cryopreservation process and again at thawing. The mechanisms of cryoinjury include osmotic effects on the cells, as well as intra- and extracellular ice formation, which can have effects such as altering the native conformation of proteins to cellular membrane disruption. Cryopreservation can cause single and double DNA breaks, reduce intrahepatic engraftment, reduce albumin production (post-transplantation), reduce cell attachment in culture and alter mitochondrial respiratory chain complex. This unique single-freeze process offers all the advantages of pooled hepatocytes without the additional cryoinjury caused by a second freeze.

KRISHGEN BioSystems

What makes the ordinary …

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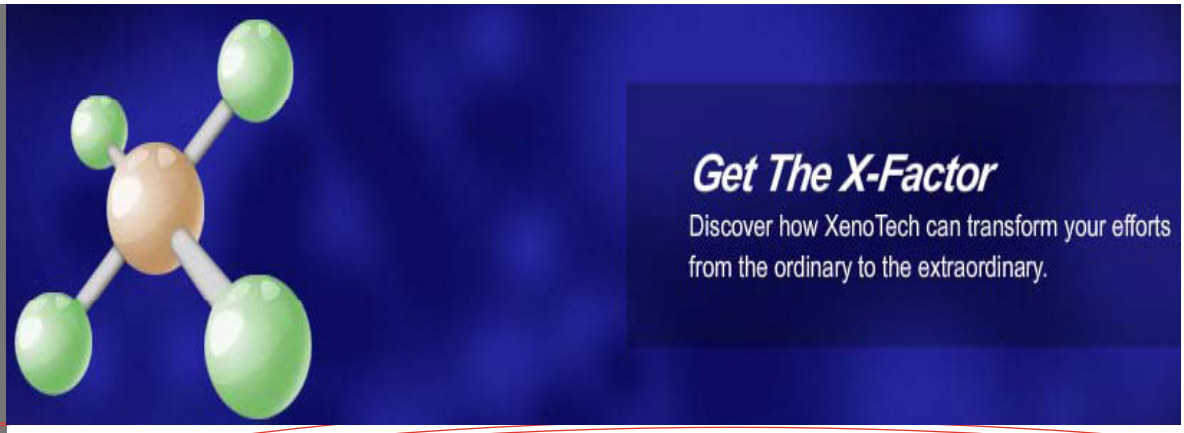

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Features and Benefits

Comparison of CYP enzyme activities in XenoTech's Xtreme 200 HLM & BD Biosciences' pool of 150 HLM:

Direct comparison of datasheets between XT and BD is misleading. XenoTech performs all CYP assays under the same experimental conditions, whereas BD Biosciences optimizes conditions for different enzymes by changing buffer composition and/or ionic strength, depending on the CYP enzyme. These differences in assay conditions influence the individual CYP activities. XenoTech assayed these large pools (Xtreme 200 and BD's pool of 150) side-by-side under the same conditions, and found only slight differences in CYP activity between the two pools.

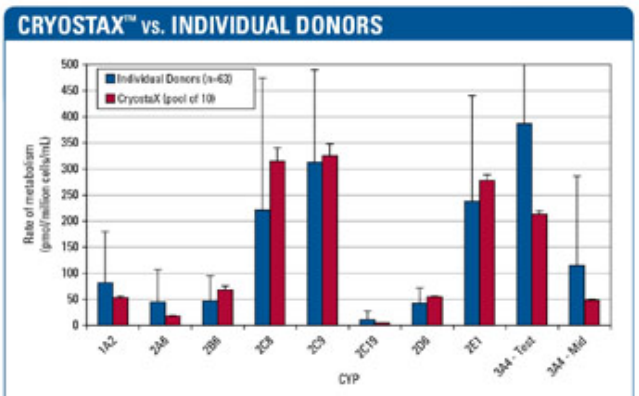
Measured levels of immunoreactive CYP protein vary widely depending on the choice of standard (recombinant or purified CYP enzyme) and the specificity of the antibody, as reported by Perrett et al., 2007). Western immunoblotting is semi-quantitative at best because the concentration-response curve for the standard is not the same as that for the corresponding protein in Microsomes.

CryostaX™ is the largest multi-donor pool available prepared using a *single-freeze* process.

- Single freeze process
- 10 donors
- Large lots
- High-quality data
- Convenient
- Cost-saving (versus pooling your own)
- Allows for future customization of human hepatocytes

Packaging :

- 10 x 100 uL = 1.0 mL total volume
- AMY: 5 million cells



This chart compares the mean of CYP activities from 63 individual human donor lots of cryopreserved hepatocytes versus the CryostaX™ pool of 10. Individual lots were each measured in triplicate. The error bars show the extent of inter-individual variance. CryostaX™ enzymatic activities were each measured in triplicate on three separate days using XenoTech's validated LC/MS/MS methods.

CryostaX

KRISHGEN BioSystems