Updated on: 23th July 2024

CERTIFICATE OF ANALYSIS

Lot#: CHM2412-L-SC-P1-Z

PRODUCT DESCRIPTION

Reference: HuSC
Product: Cryopreserved Human Stellate Cells
Cellular Passage: P1
Size/Quantity: 100.000 cells/vial

Isolation date: 22nd May 2024
Storage conditions: -196°C
Sterility test: negative for mycoplasma, bacteria, yeast, and fungi.

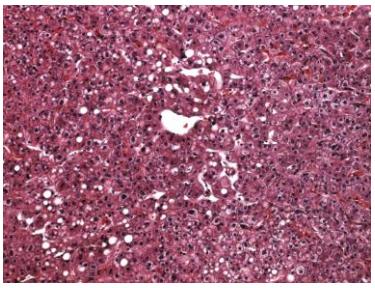
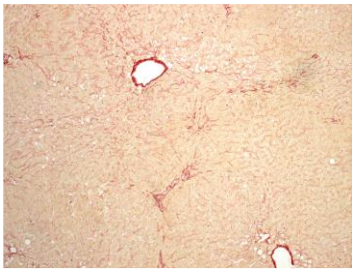
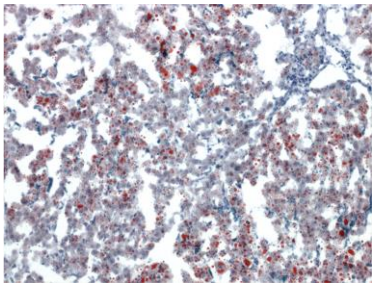
DONOR DEMOGRAPHICS

Species	Gender	Race	Age	BMI	Smoker	Alcohol Use	Drug Use
Human	Male	Caucasian	53	29.05	No	No	No

Pathology	Serological Data[1]
Metastatic tumor	Tested negative less than 3 months before surgery

Patient informed consent was obtained. [1]The donor was serologically tested negative for following infectious diseases: HIV, Hepatitis B and C, and SARS-CoV-2. Donor medical history was also examined prior to accepting this donor. *For donor's medication information, please contact us.*

DONOR HISTOLOGY

Hematoxylin & Eosin staining	Sirius Red staining	Oil red staining
		

- Hematoxylin & Eosin: Hepatocyte stress and steatosis are observable in discrete areas, with cell death (anuclear hepatocytes) and proliferation (small hepatocytes) also present. Granuloma detected.

- Sirius red: Liver with very light matrix deposition in periportal and pericentral areas. Sinusoids are mostly normal regarding matrix accumulation.

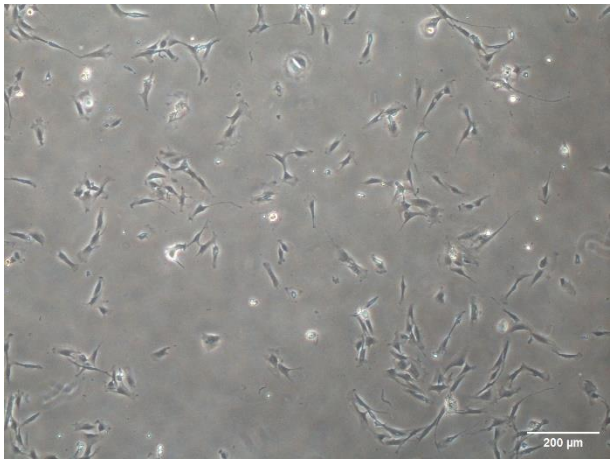
- Oil red: Liver with disseminated oil red positive vesicles/vacuoles, with varying sizes. Some seem to be stress related vesicles.

Conclusions: Discrete areas with cell death (anuclear hepatocytes) and proliferation (small hepatocytes) are also present. Granuloma detected. Very light matrix deposition in periportal, and pericentral areas.

CHARACTERIZATION FOR HUMAN STELLATE CELLS

Post Thaw Lot information	Result	n
Number of viable cells/vial:	145.000	1
Viability (%):	93.5	1
Cell seeding density (cells/cm²):	5.000	

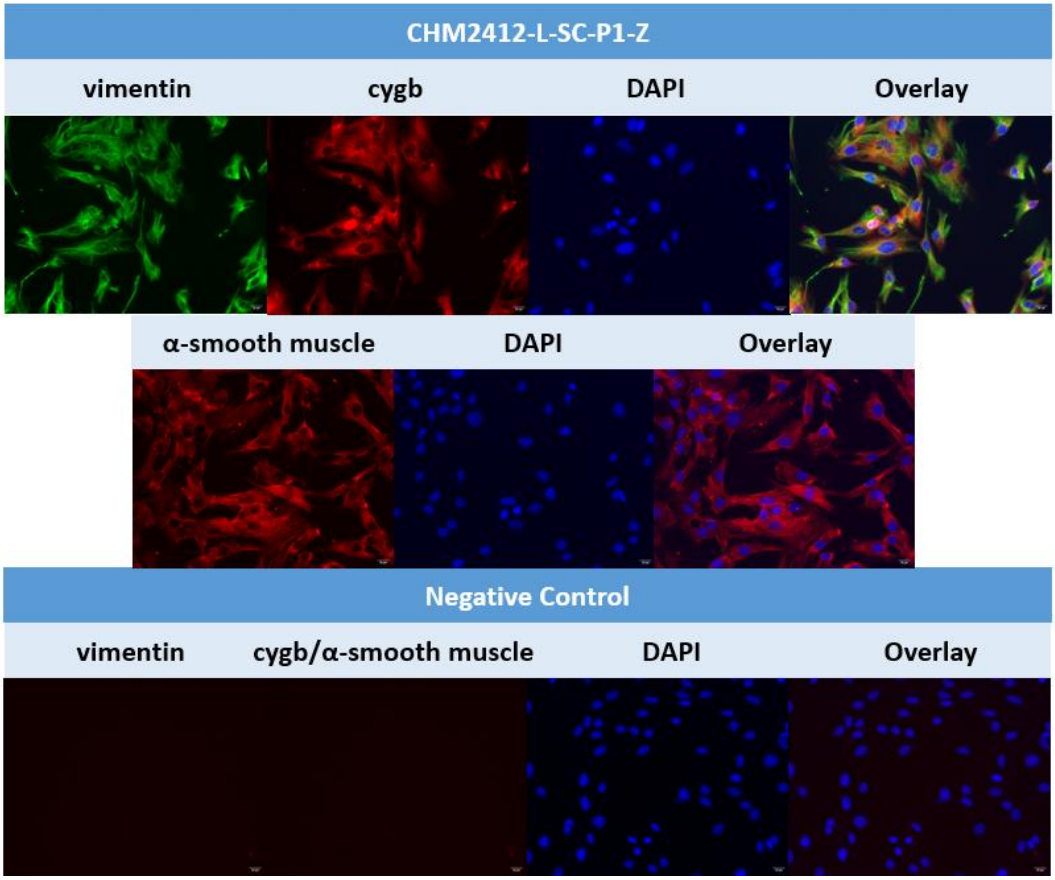
Cell morphology



Human stellate cells were thawed and seeded according to BeCytes Biotechnologies protocol. The number of cells and viability post-thawing was assessed by using the trypan blue exclusion assay. Phase-contrast image 5 days after seeding is shown on the panel.

IMMUNOFLUORESCENCE ANALYSIS

Human stellate cells are positive for vimentin, and cygb and negative for α-smooth muscle actin when they are quiescent. When they become activated, they start to express α-smooth muscle actin.



Cells were cultured on 8 well chamber slide till reach the confluence. The first panel shows green immunofluorescence for vimentin which is evident in the cell body and cytoplasmic processes in the cultured stellate cells. Red immunofluorescence for cygb is also positive. The second panel shows some expression for α-smooth muscle actin. Both panels show blue immunofluorescence for DAPI, a cellular nuclei marker. Negative controls are showed on the bottom of each panel with all the markers used for the SC.

If you need help for an experiment, just contact us, our experts will be pleased to assist you

CERTIFICATION:

The viability and performance of the primary human liver endothelial cells provided depend primarily on the use of appropriate media and reagents, as well as the use of sterile plastics. Likewise, proper handling protocols must be followed. Please note that if these parameters are not carefully considered, the cellular response obtained in the assays may be lower than expected.

Name	Tittle	Signature	Cytes Biotechnologies, S.L.	Date
Pilar Sainz de la Maza	Quality Manager			23/07/24