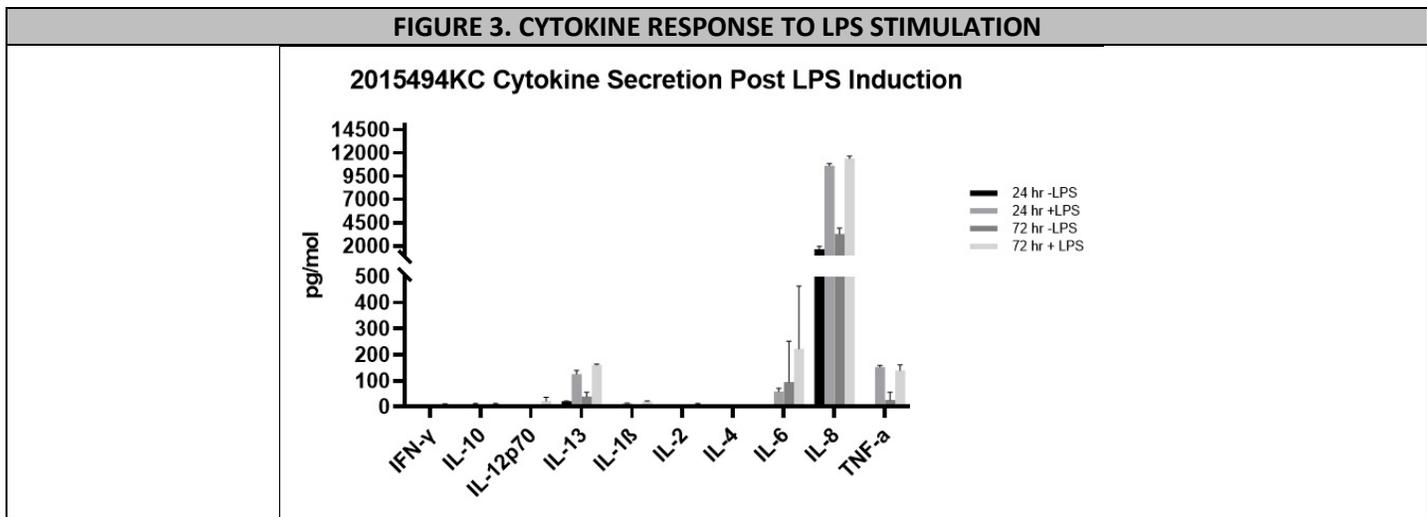
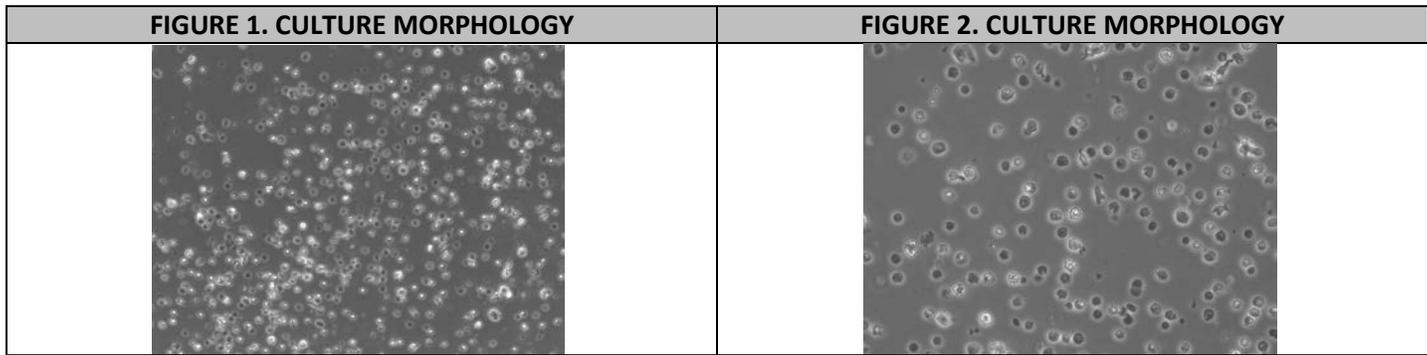


CELL TYPE:	Human Kupffer Cells	Lot No:	2015494
Storage Condition:	Cryopreserved in Vapor Phase Liquid Nitrogen (< -150°C)		

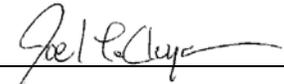
POST THAW RESULTS			QUALITY CONTROL RESULTS	
Average Viability	Average Viable Cells/Vial	Average Cell Size	Characteristic Morphology	Cytokine Response
89%	1,100,000	10.1 microns	See Figures 1 & 2	See Figure 3



CYTOKINE:	INF-γ	IL-10	IL-12p70	IL-13	IL-1β	IL-2	IL-4	IL-6	IL-8	TNF-α
24 HR	14.54	14.03	10.28	6.05	5.93	8.64	12.11	31.32	6.44	27.91
72 HR	3.62	3.42	9.16	4.12	4.25	3.52	4.53	2.34	3.46	5.37

Values indicate fold change above no LPS control

Results above determined by following LifeNet Health’s Kupffer Cell care and handling protocols.

Signature:  Date: 07/06/20

Print Name: Joel LeCluyse Title: Operations Manager

Authorization was obtained from the donor or the donor’s legal next of kin for use of the tissue and its derivatives for research purposes.
Caution: The user should treat all human cells as potential pathogens. Wear protective clothing and eyewear. Practice appropriate disposal techniques for potentially pathogenic or biohazardous materials. For research use only. Not intended for human or animal therapeutic or diagnostic use.

For more information: cells_tissues@lifenethealth.org