

Human Lymphocyte (T cells, B cells, NK cells) Isolation Frequently Asked Questions



Quality

Target viability & purity $\geq 90\%$



Method

Magnetic cell separation via negative or positive selection



Target Product

Frozen aliquots of 5 - 10 million cells

How is the biospecimen sample collected?

A Sanguine phlebotomist visits the study participant's home, collects whole blood via venipuncture, and ships via overnight delivery at a specified temperature to the Sanguine laboratory for processing.

Samples are typically processed within 24 hours of initial collection

How are lymphocytes isolated?

Our standard protocol employs magnetic isolation kits to extract cells of interest directly from whole blood using negative or positive selection.

- For negative selection, cell types other than the specified cell type are targeted and magnetically extracted from the whole blood, leaving the cells of interest untouched in solution.
- For positive selection, the specified cell type is targeted directly and magnetically separated from other whole blood components, which are subsequently washed away.

Sanguine recommends negative selection in experimental designs that require target lymphocytes to be in an inactivated state.

How are lymphocyte samples cryopreserved and stored?

Cell aliquots are cryopreserved via a slow-freeze process in a -80°C controlled-rate freezer. The samples are then transferred into liquid nitrogen for long-term storage.

Sanguine can accommodate long-term storage of your samples in liquid nitrogen with 24/7 temperature monitoring and on-demand retrieval.

How do I receive them?

- Lymphocytes and other samples are shipped from the laboratory in accordance with your study timeline, either upon request or on a set schedule.
- Samples are shipped on dry ice or via cryoshippers upon special request.

Sanguine recommends storing processed samples in our lab and then batch shipping them upon study completion to limit batch-to-batch variability and control costs.

Can I conduct a pilot study prior to a larger study?

Yes. We understand the need to obtain results early in the drug development process and are happy to accommodate smaller numbers of samples to ensure your study success. Since samples are collected in-home, it may be cost-effective and scientifically advisable to request additional samples simultaneously (e.g., all PBMCs, serum/plasma, skin tapes, stool, and urine) or multiple samples from the same study participant over time.

Talk to our study design experts about maximizing the value of in-home collection in obtaining a systems biology and longitudinal approach to patient biology.

How do you handle specific inclusion and exclusion criteria requests?

Laboratory tests can be performed concurrently on serum from any whole blood sample to ensure updated compliance with your specified criteria (e.g., HIV and/or hepatitis B/C negative). Updated medical records are included with all study participants when applicable.

Do you guarantee a sample minimum?

Yes. Since $>90\%$ of our study participants are recallable, we can usually recollect samples that do not meet Sanguine's or our client's quality standards.