# TruCytes® TBNK
# Synthetic Cells
# SSB-08-A

**Summary**

TruCytes TBNK synthetic cells are lyophilized cell mimics that feature TBNK biomarkers with scatter coordinates (FSC and SSC) that match lymphocyte, monocyte and granulocyte populations for lyse and wash conditions. This product contains no bio-hazardous material so it is safe to use in any environment and requires no special disposal.

**Application**

This product is intended to provide positive and negative signal detection for specified surface biomarkers that are targeted by specific antibodies. The following list shows the sub populations of synthetic cells that comprise the TBNK:

- CD4+ T-cells: CD45+, CD3+, CD4+
- CD8+ T-cells: CD45+, CD3+, CD8+
- B-cells: CD45+, CD3-, CD19+
- NK cells: CD45+, CD3-, CD16/56

NOTE: TruCytes TBNK Synthetic Cells have been designed to work with TBNK antibody reagent kits containing the clones listed in the table below. Users are recommended to test the clones other than the listed below to determine the compatibility.

| TBNK Biomarker | Clone of Antibody |
|---|---|
| CD3 | SK7 |
| CD4 | SK3 |
| CD8 | SK1 |
| CD16 | B73.1 |
| CD19 | SJ25C1 |
| CD45 | 2D1 |
| CD56 | NCAM16.2 |

It is an ideal process control for assays that have measured readouts using flow cytometry.

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

**Materials**

TruCytes are hydrogels that are lyophilized for stability and ease of use. Each bottle contains approximately $2.5x10^5$ particles.

**Instruction for Use**

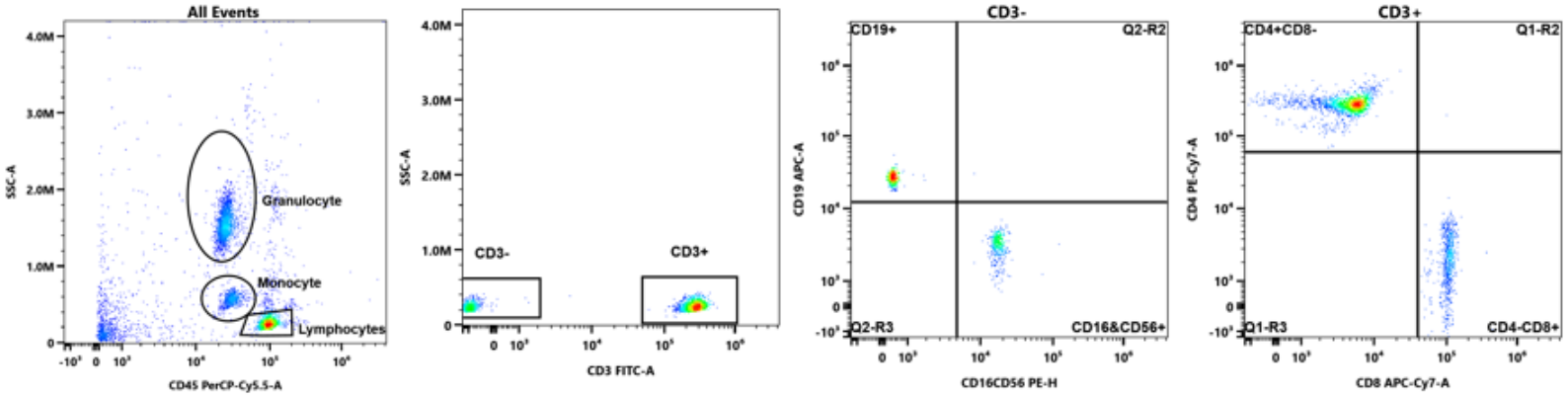
1. Tap down the vial to ensure that all lyophilizate is collected at the bottom of the vial.
2. Add 250 uL of PBS buffer. Make sure to not contact/disturb the lyophilizate with your pipette until the pellet has been soaked in the buffer. Gently pipette up and down to mix and ensure that all contents are fully dissolved before proceeding. Take the appropriate amount of reconstituted material out for each test.
3. Add an appropriate amount of staining antibody (typically 5 uL standard test). Vortex mixture on high for 2 seconds to mix thoroughly.
4. Incubate the mixture at RT in the dark for 15 - 30 min.

5. Add 1 mL of 1X PBS, vortex, then transfer the reconstituted mixture to an appropriate tube.
6. Centrifuge tube at 500 rcf for 5 min.
7. Carefully pipette off the liquid without disturbing the pellet of particles.
8. Repeat Steps 5 - 7 to wash the particles again. Recommended: Perform 3 total washes to prevent non-specific binding.
9. Add 100 uL of 1X PBS or staining buffer to the tube.
10. View and acquire particles on FSC-A and SSC-A using the same instrument settings as real whole blood cells.
11. For best results, set the flow rate on the cytometer to low.

**Storage** **Store lyophilized products at -20°C upon receipt.**
Upon reconstitution, products should be used within seven (7) days when stored at 2 - 8°C.

**Expiration** One year from the date of manufacturing

**Figure 1. Scattergram and Gating for TBNK.** The following scattergrams show the gating strategy for proper detection of T, B, and NK subset populations.

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