Chromium™ Single Cell Applications
Guidelines for Optimal Sample Preparation

Key points to consider before starting cell preparation:
1. Cells should be in a single cell suspension prior to following these guidelines.
2. Keep cells on ice at all times.
3. Treat cells gently (e.g., use wide-bore pipette tip during cell handling).
4. Keep sample preparation time to a minimum.
5. Perform cell counts and viability tests in replicate.
6. Wash cells with PBS + 0.04% BSA to remove contaminants such as ambient RNA and unwanted buffer components.

Footnotes:
* Refer to https://support.10xgenomics.com/solutions/questions/cell-prep for alternative washing protocols or Chromium Single Cell 3' Assay Kits v2 User Guide (CG000093) for more example protocols for various cell types.
† If cell stock concentration is outside of optimal range for first count, concentrate/dilute cell suspension first and repeat replicate counts.
‡ The grid area of the hemocytometer consists of nine 1 x 1 mm squares. Optimal cell concentration should result in 50-100 cells per square.
§ Each automated cell counter has an optimal range for cell stock concentrations to assess.
¶ Refer to Single Cell Protocols - Cell Preparation Guide (CG00053) for alternative washing platforms.
® Filter using either™ Flowmi® or MACS Flowmi® using SmartStrainer®.

Legend:
- Critical
- Additional steps recommended
- Decision