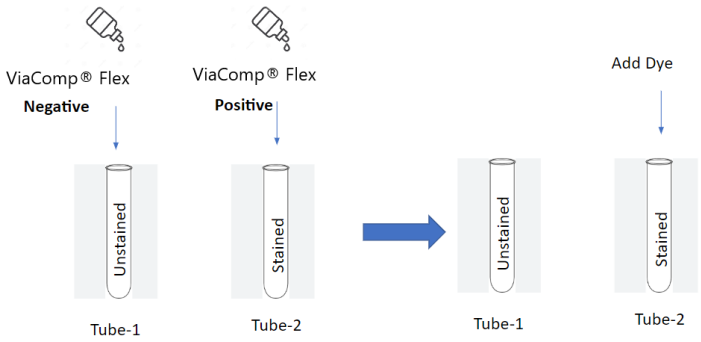
1. Technical Data Sheet

Summary	ViaComp® Flex controls consist of separate positive and negative cell mimics. Positive cell mimics bind to both DNA-intercalating as well as amine-reactive viability dyes to simulate the viability characteristics of the cells. Negative cell mimics are designed to be acquired separately to maximize signal-to-noise ratio.
Application	ViaComp® Flex is intended to be used as single-stain and assay controls to simulate the viability characteristics of the cells. The positive and negative peaks can aid in identifying live and dead cell populations. Note: ViaComp® Flex performance has been verified and validated on analytical flow cytometers and not on cell sorters. **For Research Use Only. Not for use in diagnostic or therapeutic procedures.**
Materials	ViaComp® Flex viability controls are cell mimics suspended in aqueous solution and are packaged in a convenient dropper bottle. Each drop contains approximately 6.6 x 10^4 cell mimics.
Handling and Safety	No special handling or safety precautions are necessary. See SDS at www.slingshotbio.com.
Storage	ViaComp® Flex should be stored at -20 °C once the product is received. **24 hours before its intended use**, store it at 2-8 °C to thaw. Once thawed, store at 2-8 °C.
Expiration	One year from the date of manufacturing (DOM); **Shelf life:** Six months from the date of thaw.* *Follow the Expiration date if it occurs before shelf life expiration
Instructions for Use	**Staining with DNA dyes** 1. Allow ViaComp® Flex bottles to warm up to room temperature before staining. 2. Vortex the ViaComp® Flex bottles on high for 2-3 seconds to resuspend the cell mimics. 3. Add 1 drop of positive cell mimics to a tube and 1 drop of negative mimics to a separate tube. Ensure that each drop goes to the bottom of the respective tube. Add 1x PBS according to desired dilution for DNA-binding dye. 4. See the illustration below as an example



5. Add desired amounts of DNA dye to the positive tube.

   Note: It is recommended to determine the titer of the viability dye that works best for your application.

6. Incubate at room temperature for 10-30 min, protected from light

   Note: Refer to the specific vendor's instructions for the incubation time if different.

7. Centrifuge the tube for 5-6 minutes at 500 x g. Remove excess supernatant without disturbing the bead pellet.
8. Wash by resuspending the bead pellet in 2 ml of 1% BSA in 1x PBS or desired staining buffer and then vortex.
9. Repeat steps 6 and 7 to wash particles thoroughly. Resuspend the cell mimics in desired volume of staining buffer.
10. View and acquire positive and negative ViaComp® Flex particles using the same FSC and SSC settings as leukocytes.
11. For best resolution, use a low flow rate on your cytometer.

Staining with Amine-reactive dyes

1. Allow ViaComp® Flex bottles to warm up to room temperature before staining.
2. Vortex the ViaComp® Flex bottles on high for 2-3 seconds to resuspend the cell mimics in the buffer.
3. Add 1 drop of positive cell mimics to a tube and 1 drop of negative mimics to another tube. Ensure that each drop goes to the bottom of the respective tube. Add 1x PBS according to desired dilution for amine-reactive dye.
4. Add desired amount of amine-reactive dye to the positive tube.

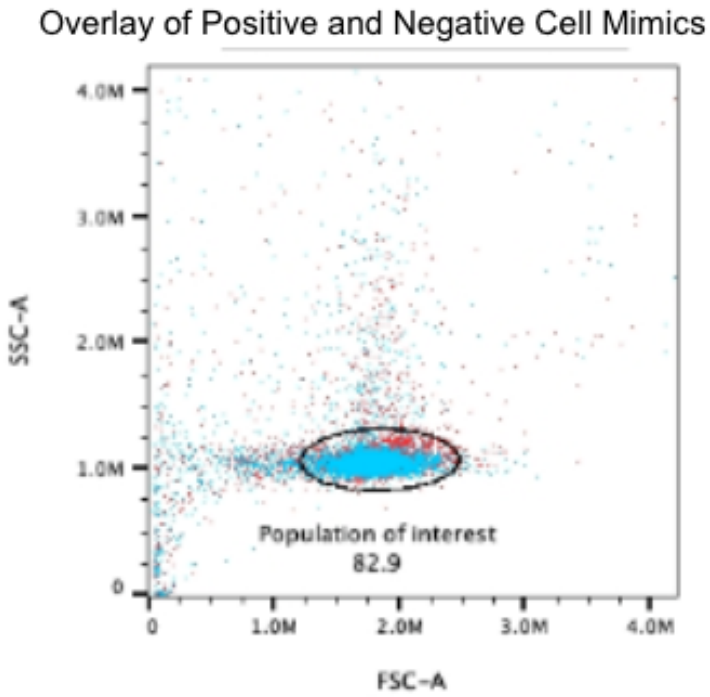
Note: It is recommended to determine the titer of the viability dye that works best for your application.

5. Incubate at room temperature for 20-30 min protected from light.

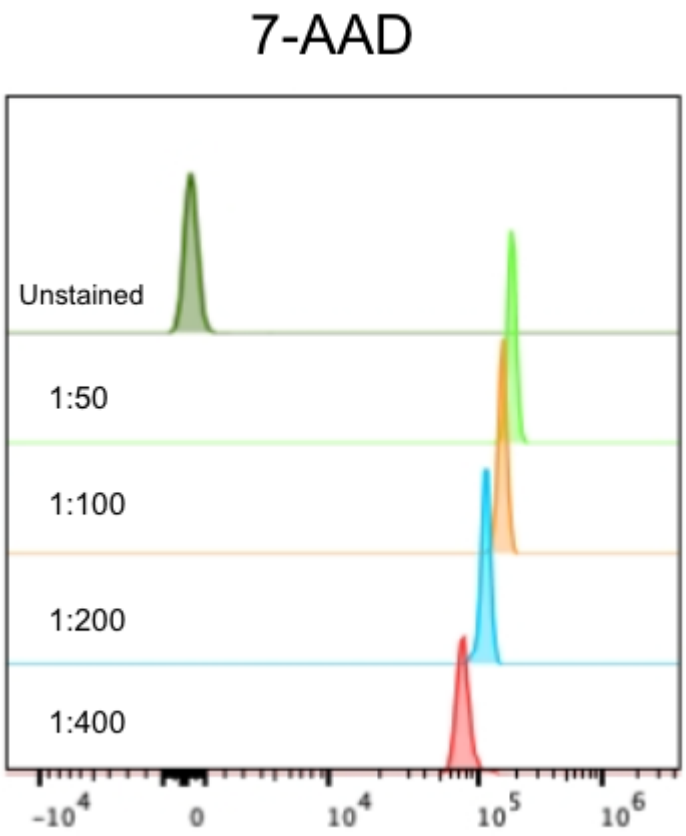
   Note: Refer to the specific vendor's instructions for the incubation time if different.

6. Centrifuge the tube for 5-6 min at 500 x g. Remove excess supernatant without disturbing the bead pellet.
7. Wash by resuspending the bead pellet in 2 ml of 1X PBS with 1% BSA or desired stain buffer and then vortex.
8. Repeat steps 6 and 7 to wash particles thoroughly. Resuspend the cell mimics in desired volume of staining buffer.
9. View and acquire positive and negative ViaComp® Flex particles using the same FSC and SSC settings as leukocytes.
10. For best resolution, use a low flow rate on your cytometer.

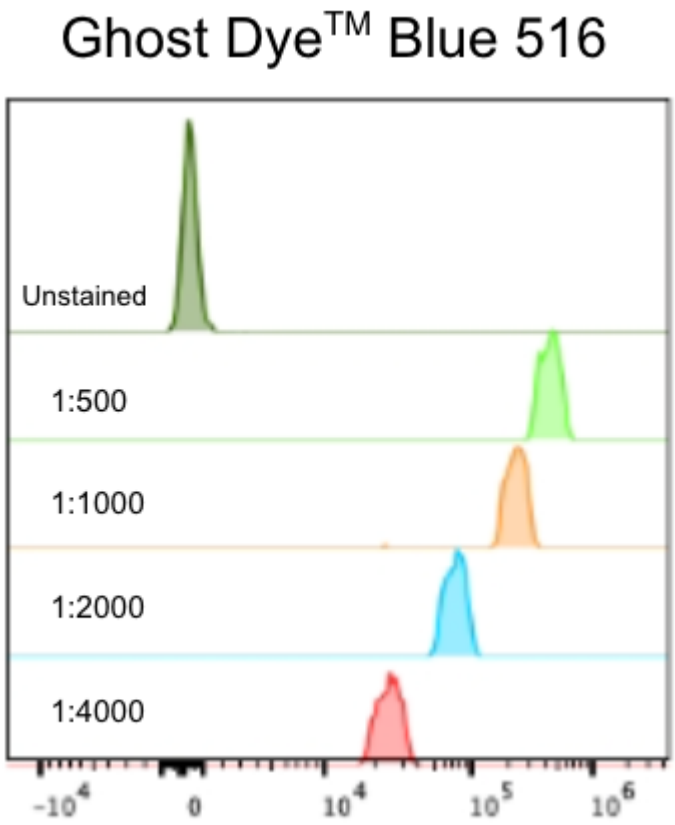
QC Data



Example scatter profile for positive and negative ViaComp® Flex populations



Example titration data using 7-AAD



Example titration data using Ghost Dye ™ Blue 516