

10X RBC lysis buffer

Cat# C1066-1L

Store at 2-8°C

INTRODUCTION

This 10X RBC Lysis Buffer (Multi-species) is specially formulated for optimal lysis of erythrocytes in single-cell suspensions of peripheral blood and hematopoietic tissues such as spleen. This buffer can be used for lysis of human, mouse, rat, canine, and non-human primate samples. 10X RBC Lysis Buffer (Multi-species) contains ammonium chloride, which lyses red blood cells with a minimal effect on lymphocytes when used as instructed.

Product components

C1066 10X RBC lysis buffer 1L	
NH ₄ Cl	1500 mM
KHCO ₃	100 mM
EDTA.Na ₂ ·2H	10 mM

Applications Tested

The 10X RBC Lysis Buffer (ACE Biolabs #C1066) has been tested on normal human, mouse, rat, canine, and rhesus peripheral blood followed by flow cytometric analysis. This is a 10X solution and should be diluted to 1X using reagent-grade water. Use the 1X solution within 1 month of preparation.

Protocol A: Using 1X or 10X RBC Lysis buffers

Both the 1X and 10X RBC Buffers are designed to lyse RBC in whole blood (using heparin or EDTA as the anti-coagulant) or tissue preparations using ammonium chloride-based osmotic shock. The 10X RBC Lysis Buffer (ACE Biolabs #C1066) is specially formulated for optimal lysis of RBC in peripheral blood. It has been validated to work on whole blood from human, mouse, rat, canine and non-human primate sources. The 1X RBC Lysis Buffer is optimized for lysis of RBC in human peripheral blood or single-cell suspensions of mouse hematopoietic tissues such as spleen or bone marrow.

General notes:

1. Before use, the 10X RBC Lysis Buffer (ACE Biolabs #C1066) must be diluted 1:10 with room temperature, reagent-grade water.
2. The 10X RBC Lysis Buffer (ACE Biolabs #C1066) has been shown to work equivalently in blood collected using either heparin or EDTA as the anti-coagulant.
3. In general, a small number of residual RBC does not interfere with subsequent use of cells and can be gated out during flow cytometric analysis; however, a second round of lysis can be performed, if desired.

Materials:

1. 1X PBS
2. 10X RBC Lysis Buffer (ACE Biolabs #C1066) or 1X RBC Lysis Buffer
3. 50-mL conical tubes
4. Flow Cytometry Staining Buffer or other buffer of choice
5. 12 x 75 mm round-bottom test tubes
6. Primary antibodies (directly conjugated)

Lysis of mouse or rat spleen and bone marrow cells:

1. Harvest mouse spleen and prepare a single-cell suspension.
2. Pellet the cells by centrifugation at 500 x g for 5 minutes at room temperature and aspirate the supernatant.
3. Resuspend the pellet in 3-10 mL of prepared 1X RBC Lysis Buffer (ACE Biolabs #C10664).
4. Incubate for 4 - 5 minutes at room temperature.
5. After lysis, centrifuge immediately at 500 x g for 5 minutes at room temperature. Decant the supernatant.
6. Resuspend the pellet in 2 mL of Flow Cytometry Staining Buffer and centrifuge again.
7. Decant the supernatant and perform a cell count at this time.

PRODUCT USE LIMITATION

These products are intended for research use only.