NucleoGene Red Blood Cell Lysis Buffer (10X)

Instructions for Use

Release Date— 11.09.2023

Store at +4°C

REF

NGOT010 100 ml
NGOT010 200 ml

For research use only.
Not suitable for diagnostic use.
For professional use only.

Description

Out 10X sterile RBC Lysis Buffer, Red Blood Cell Lysis Buffer, has been designed, formulated and tested for the optimal lysis of RBCs (erythrocytes), while having minimal effect of leukocytes, including lymphocytes, when used as directed. The RBC Lysis Buffer uses an optimized concentration of ammonium chloride and enhancers to lyze the red bloods cells that does not effectively lyze the nucleated RBCs. The use of RBC Lysis Buffer allows for the preferential lysis of red blood cells from whole blood and as these are the majority of cells in whole blood permits the concentration of the nucleated white blood cells. Ideal for the isolation of DNA and RNA from blood. Using RBC Lysis Buffer eliminates the need for toxic organic solvents or chaotropes.

Storage and Stability

The kit is shipped at ambient temperature; upon arrival, store at 4oC. The product is stable for up to one year, if stored/used properly.

PREPARATION BEFORE USE

1. Warm the buffer to room temperature. Dilute the RBC lysis buffer 1:10 with ultrapure water. Add 1ml RBC Lysis buffer for every 9ml ultrapure water. The pH of the diluted buffer should fall within the range of pH7.1-7.4. Adjust the pH if necessary

2. Warm blood sample to room temperature.
NOTE: The blood sample must be <1 month old and been stored in anti coagulants (i.e. EDTA, heparin, and citrate). For RNA isolation, use only fresh (<3 days old) blood for optimal DNA isolation.

PROTOCOL FOR 0.5ML BLOOD

1. Add 0.5ml whole blood to a 1.5ml tube containing 1ml RBC Lysis Buffer. Invert the tube to mix and incubate for 5 minutes at room temperature on a shaking platform or with periodic inversions. Do not vortex.

2. Centrifuge 2,500xg for 5 minutes then remove supernatant carefully without disturbing the pellet. If pellet is not white, repeat steps 1 and 2 with a further 1ml RBC Lysis Buffer.

3. If a lower red pellet is still visible below the white pellet then repeat steps 1 and 2 with fresh blood with the following modifications:
a. Ensure the RBC Lysis Buffer is at room temperature.
b. Increase the incubation to 15 minutes
c. Use a higher ratio of RBC Lysis Buffer to blood (3:1).

E-mail: info@nucleogene.com
Web: www.nucleogene.com

PROTOCOL FOR SMALLER BLOOD VOLUMES

Blood Volume (µl)	RBC Lysis Buffer Volume (in steps 1 and 2) (µl)
400-500	1000
300-400	800
200-300	600
100-200	400
1-100	200