

RBC Lysis/Fixation Solution (10X)

Catalog# / Size	422401 / 50 mL
Regulatory Status	RUO
Other Names	Red blood cell lysing solution
Description	BioLegend RBC Lysis/Fixation Solution has been designed and optimized for one-step lysing of red blood cells (RBCs) and fixation of the remaining blood elements (such as leukocytes) following immunofluorescent staining with fluorochrome-conjugated antibodies. It can be used for either lyse/wash or lyse/no wash immunofluorescent staining procedures. This solution is supplied as a 10X concentrate. Dilute to 1X working solution with room temperature dI H ₂ O prior to use.

Product Details

Formulation	This RBC Lysis/Fixation Solution is supplied as a 10X solution and should be diluted to 1X in room temperature deionized water.
Preparation	The pH of the 1X solution should fall within the range of pH 7.1 - 7.4. Adjust the pH if necessary. Warm the 1X solution to room temperature prior to use.
Storage & Handling	Store RBC lysis buffer between 2°C and 8°C.
Application	FC - Quality tested

Recommended Usage

Whole Blood Lyse/Wash Procedure:

1. Prepare 1X RBC Lysis/Fixation solution by diluting 1 part of BioLegend RBC Lysis/Fixation solution with 9 parts of **room temperature** dI H₂O.
2. Mix 100 µl of whole blood with fluorochrome-conjugated antibody.
3. Incubate at room temperature, in the dark, for 20 minutes.
4. Add 2.0 mL 1X RBC Lysis/Fixation solution, gently mixing each tube immediately.
5. Incubate at room temperature, in the dark, for 15 minutes.
6. Centrifuge at 350Xg for five minutes. Discard supernatant.
7. Add 2 mL BioLegend Cell Staining Buffer (Cat No 420201).
8. Centrifuge at 350Xg for five minutes. Discard supernatant.
9. Resuspend cell pellet in 0.3-0.5 mL Cell Staining Buffer.
10. Analyze cells immediately by flow cytometry or store at 4°C, in the dark, for no longer than 12 hours.

Whole Blood Lyse/No Wash Procedure:

1. Prepare 1X RBC Lysis/Fixation solution by diluting 1 part of BioLegend RBC Lysis/Fixation solution with 9 parts **room temperature** dI H₂O.
2. Mix 50 µl of whole blood with fluorochrome-conjugated antibody.
3. Incubate at room temperature, in the dark, for 20 minutes.
4. Add 0.45 mL 1X RBC Lysis/Fixation solution, gently mixing each tube immediately.
5. Incubate at room temperature, in the dark, for 15 minutes.
6. Analyze samples by flow cytometry.

Application Notes	The 1X Lysis/Fixation solution can be used within 1 month from the date of preparation. It can be stored at room temperature or between 2°C and 8°C.
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Application References

1. Horvath P, *et al.* 2012. *J Infect Dis.* [PubMed](#)

(PubMed link indicates BioLegend citation)

Product Citations

1. Camponova P, *et al.* 2017. *Can J Physiol Pharmacol.* 10.1139/cjpp-2016-0710. [PubMed](#)
2. Lee J, *et al.* 2017. *Biomaterials.* 10.1016/j.biomaterials.2017.07.014. [PubMed](#)
3. Horváth P, *et al.* 2012. *J Infect Dis.* 205:923. [PubMed](#)
4. Kusner L, *et al.* 2014. *PLoS One.* 9:102231. [PubMed](#)
5. Javed A, *et al.* 2015. *PLoS One.* 10: 0142086. [PubMed](#)
6. Foster G, *et al.* 2015. *J Immunol.* 195: 5380 - 5392. [PubMed](#)

7. Nerdal P, *et al.* 2016. J Immunol. 197: 3059 - 3068. [PubMed](#)
8. Mackroth M, *et al.* 2016. PLoS Pathog. 12:e1005909. [PubMed](#)
9. Curry A, *et al.* 2017. PLoS One. 12(2):e0171586. [PubMed](#)

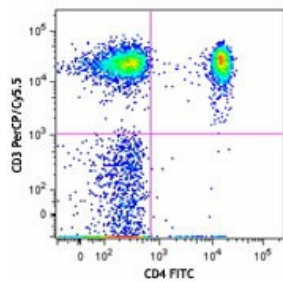
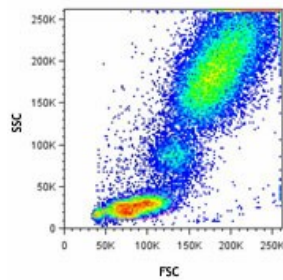
Antigen Details

Gene ID NA

Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Product Data



Human peripheral blood cells were stained with anti-human CD3 PerCP/Cy5.5 and anti-human CD4 FITC; red blood cells were lysed with BioLegend RBC Lysis/Fixation Solution.

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