

Resource Summary Report

Generated by [dkNET](#) on Sep 13, 2026

How to Prepare a Single Cell Suspension from a Frozen Cell Sample

DOI:10.17504/protocols.io.4umgwu6

Type: Protocol

Proper Citation

Stemcell Technologies 2019. How to Prepare a Single Cell Suspension from a Frozen Cell Sample. protocols.io dx.doi.org/10.17504/protocols.io.4umgwu6

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.4umgwu6>

Authors: Stemcell Technologies

Group: STEMCELL Technologies

Summary: Preparing a single cell suspension from a frozen starting sample is critical for optimizing cell isolations by avoiding additional cell loss and enabling the maximum labeling of target cells. Performing cell separation on clumpy cell samples can result in lower recovery and may interfere with proper labeling of the target cells. Samples may sometimes appear "clumpy" when they have been exposed to repeated freeze/thaw cycles or enzymatic tissue dissociation. These cell clumps occur because environmental stresses can accelerate the rate of cell death within the sample, resulting in the release of "sticky" DNA molecules from the dying cells that can clump neighboring cells together. Adding the endonuclease deoxyribonuclease I (DNase I) into your sample can minimize the presence of free-floating DNA fragments and cell clumps. This protocol describes a method to harvest cells and prepare a clump-free single cell suspension from a frozen cell sample prior to performing cell separation.

Affiliations: STEMCELL Technologies

Version: 1

Publication Date: 2019

Proper Citation: Stemcell Technologies 2019. How to Prepare a Single Cell Suspension from a Frozen Cell Sample. protocols.io dx.doi.org/10.17504/protocols.io.4umgwu6

Record Creation Time: 20210329T220520+0000

Record Last Update: 20210329T220847+0000

Data and Source Information

Source: