BrdU Injection Protocol

This protocol is to label cells with DNA replication in vivo. Injection as short as 6 hours before muscle injury can label proliferative stem cells (Yan et al. JBC 2003, 278:8826). The dose ranges 50-300 mg/kg. The dose can be as high as 500 mg/kg, particularly for short duration labeling. BD Pharmingen protocol stated that as short as 1 hour BudU could be detected in thymus and bone marrow, and in all tissues after 24 hours (https://www.bdbiosciences.com/ds/pm/tds/550891.pdf)

Procedure:

1. Dissolve BrdU (Sigma, B5002) 20 mg/ml in 0.9% NaCl and filter sterilize the solution by using a 0.22 μ filter syringe. It can be stored at -80°C, but try to avoid repeated freeze-thaws.
2. Inject BrdU i.p. with a dose of 200 mg/kg (10 μl per g body weight). For example, for a 20 g mouse, the volume of injection would be 20 x 10 = 200 ul.