Human Interleukin-2 Reconstitution (IL-2)

I. Purpose
The purpose of this procedure is to reconstitute and properly store human interleukin-2 (IL-2). IL-2 is a secreted cytokine that is important for the proliferation of T and B lymphocytes, which is why this cytokine is used in the culturing of T cell lines or clones.

II. Reagents

<table>
<thead>
<tr>
<th>Reagent</th>
<th>Vendor</th>
<th>Catalogue #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human rIL-2 (40µg or 5.2x10^5 U/vial)</td>
<td>Thermo-Fisher</td>
<td>PHC0027</td>
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<tr>
<td>Sterile PBS</td>
<td>Life Technologies</td>
<td>14190144</td>
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<tr>
<td>Sterile 10mL syringe</td>
<td>Fisher</td>
<td>309604</td>
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<tr>
<td>Sterile 0.45 micron filter</td>
<td>TPP</td>
<td>99745</td>
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<tr>
<td>Sterile 15mL conical tube</td>
<td>TPP</td>
<td>91015</td>
</tr>
<tr>
<td>Sterile 0.65mL eppendorf tubes</td>
<td>Fisher</td>
<td>07-200-186</td>
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III. Storage
Both the lyophilized powder and the reconstituted aliquots should be stored at –80°C long term, but can be kept at -20°C for short intervals of time (1-2 weeks).

IV. Reconstitution
1. Take a vial of the lyophilized powder from the –80°C freezer and allow it warm to room temperature without the use of artificial heat (approximately 1 hour).
2. Once warmed, spray the vial with 70% ethanol, and place it in the hood for reconstitution.
3. Add 5.2mL of sterile PBS to the vial. Make sure to add the PBS very slowly to minimize splashing and overflow. Gently mix the vial to ensure the powder is completely dissolved.
4. Transfer the liquid to a sterile 10mL syringe with a sterile 0.45 micron filter on it’s end.
5. Slowly, filter into a sterile 15mL conical tube.
6. Aliquot 200µl into 1.7mL screw cap tubes and label “IL-2 100,000 U/mL [date]” on the vial. Store at -80°C (should be about 26 tubes total).

NOTE: Since IL-2 will be used in the culturing of cells, it is very important to use sterile technique throughout the entire process to reduce the chance of media contamination.

WHO Conversion Table
Please note that we use the NIBSC calibrated concentration for IL-2. The units assigned are arbitrary and used simply for mass conversion. This is the same concentration used by the NIH AIDS Reagent Program.
1µg = 1.3 x 10^4 U
NOTE: Math Overview.
Lyophilized stock is provided at 40µg, which is $5.2 \times 10^5$ U/vial. Add 5.2mL PBS for a concentration of $1.0 \times 10^5$ U/mL.