

BioLife Solutions® Recombinant Cytokines & Growth Factors Product Instructions

Product Description:

BioLife Solutions® Cytokines and Growth Factors are cell culture supplements derived from recombinant proteins expressed in *E. coli*. These instructions apply to product codes: Qk089-0050, Qk089-0100, Qk089-0500, Qk095-0025, Qk095-0050, Qk095-0100, Qk095-0500, Qk097-0025, Qk097-0050, Qk097-0100, Qk097-0500, Qk025-0050, Qk025-0100, Qk025-0500, Qk025-CTG-0500, Qk089-CTG-0500, Qk095-CTG-0500, and Qk097-CTG-0500.

Instructions for Use

Storage and Handling

- Upon receipt, lyophilized proteins should be placed at -20°C or -80°C for up to 2 years.
- Cold storage at -20°C or -80°C is especially important after reconstitution.
- We recommend that single-use aliquots are prepared to avoid freeze-thaw cycles.

Reconstitution

Important: Reference the Product Technical Data Sheet for the appropriate reconstitution solution.*

- 1 – Centrifuge briefly before reconstituting to ensure all powder is at the bottom of the vial.
- 2 – Add sufficient reconstitution solution to give a protein concentration of 0.05–1.0 mg/mL.
- 3 – Allow the reconstituted sample to stand at room temperature for >1 minute before gently agitating. Do not vortex and avoid foaming.
- 4 – Prepare single-use aliquots whenever possible to avoid freeze-thaw cycles which can damage the proteins and reduce bioactivity. Store aliquots at -80°C (or -20°C).**

Reconstitution Calculation

Mass in vial (µg) ÷ Desired concentration (µg/mL) = Volume Diluent to Add (mL)

Example: To reconstitute 25 µg of protein to a final concentration of 0.5 µg/mL:
 $25 \mu\text{g} \div 0.5 \mu\text{g/mL} = 50 \text{ mL diluent.}$

NOTES

*Physiological buffers may cause precipitation of proteins during reconstitution. This is especially important for TGF beta family and other related growth factors. If your cytokine or growth factor falls into this category, reconstitute it using the 10 mM HCl provided with each applicable order or an equivalent user-prepared, sterile-filtered 10 mM HCl solution.

**Our cytokines and growth factors are supplied carrier protein-free. If you are storing at concentrations <50 µg/mL, adding carrier protein is highly advised if compatible with your work (usually 1% w/v high purity BSA or equivalent – ensure all buffers are sterile-filtered).