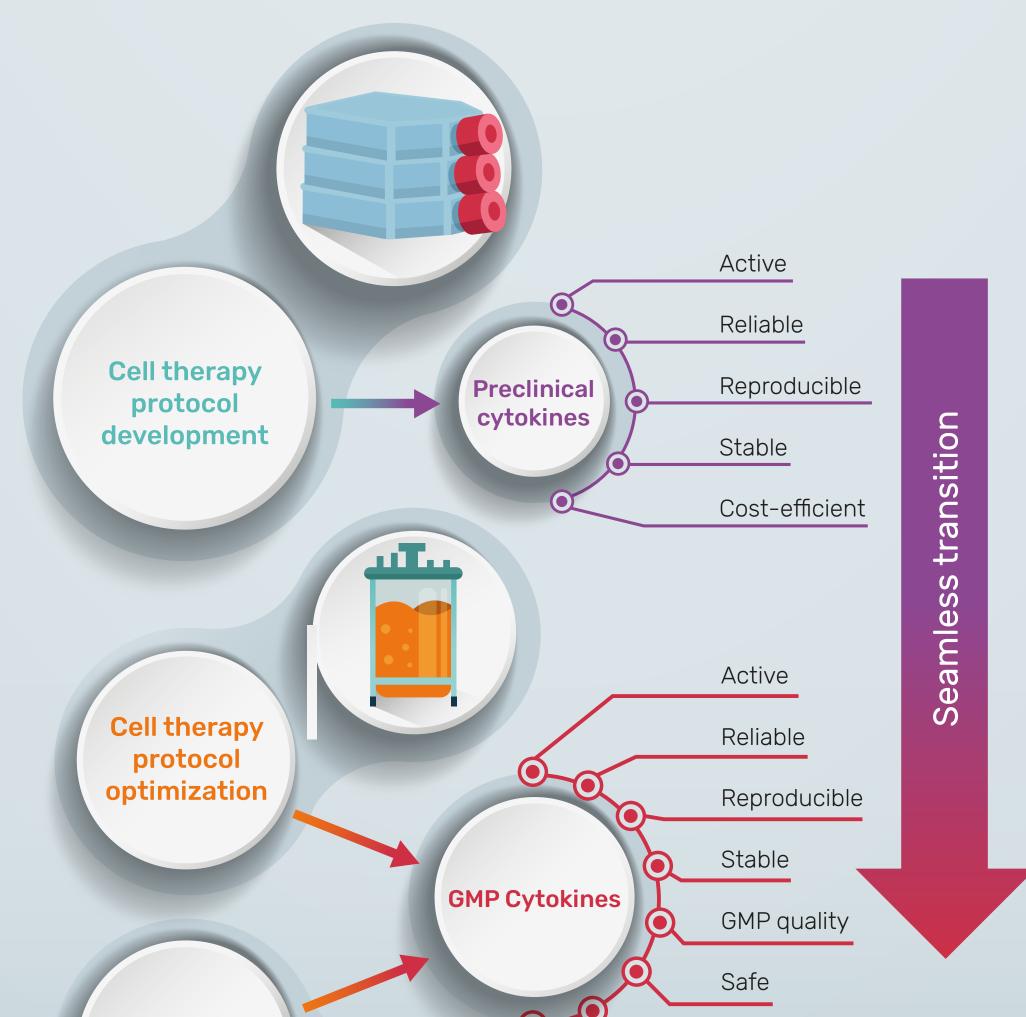




Cytokines for cell & gene therapy

from research to commercialization

How to select the right cytokines for each stage of your cell therapy development and manufacturing process



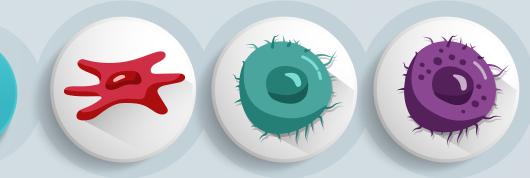


How to measure and compare cytokine activity

It is critical to quantify and understand cytokine activity and its effect on different cell types. Here are some top tips for demonstrating reproducibility and comparability.

Setting up your cell proliferation assay







Measure in International Units (IU) against a WHO international standard - if not available you should use an internal reference standard

Measure under standardized conditions

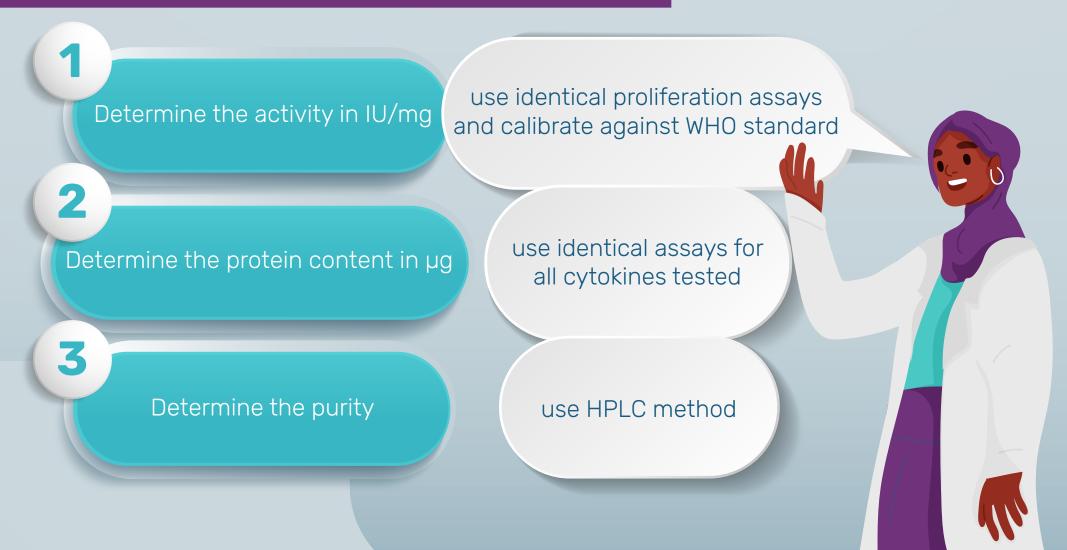
0

International Units explained

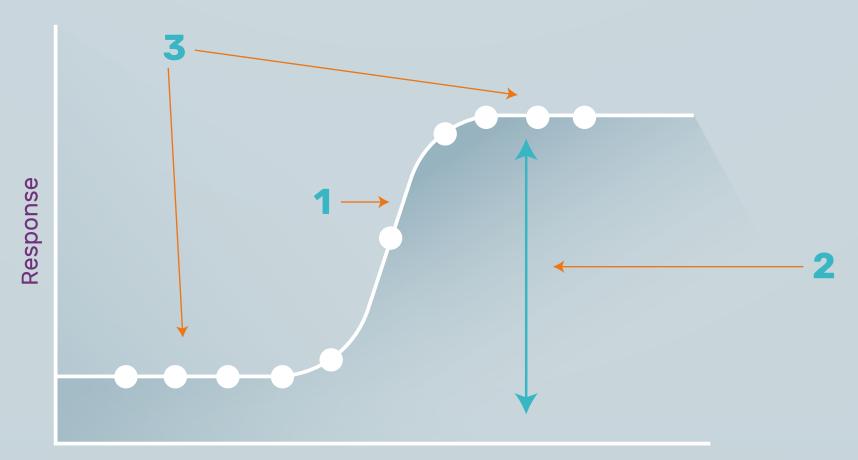
Developed by the WHO, international units (IU) are assigned to international standards or other reference materials to allow assessment of biologicals in a consistent, internationally agreed manner.

Comparison between different providers can only be done if **identical assays** are used.

Three steps for comparative side-by-side testing



Analyzing biological activity results



Cytokine concentration

2

The steeper the curve the higher the activity

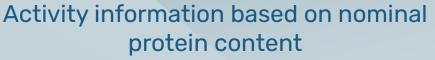
A larger distance between the minimum and maximum response indicates that the cells react well to the added cytokine



These sections should be horizontal, if not the assay is disturbed

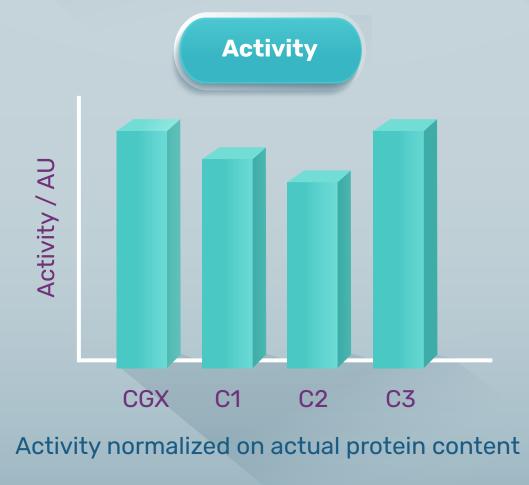
Cytokine activity is dependent on protein content. These graphs show the activity of CellGenix® rh IL-15 (CGX) compared to different providers (C1-C3) based on nominal protein content vs actual protein content.





CGX C1 C2 C3 Protein content determined in area units via HPLC elution profile

Protein Content



Absorbtion Units (AU)

Click here to find out more about CellGenix® cytokines.



