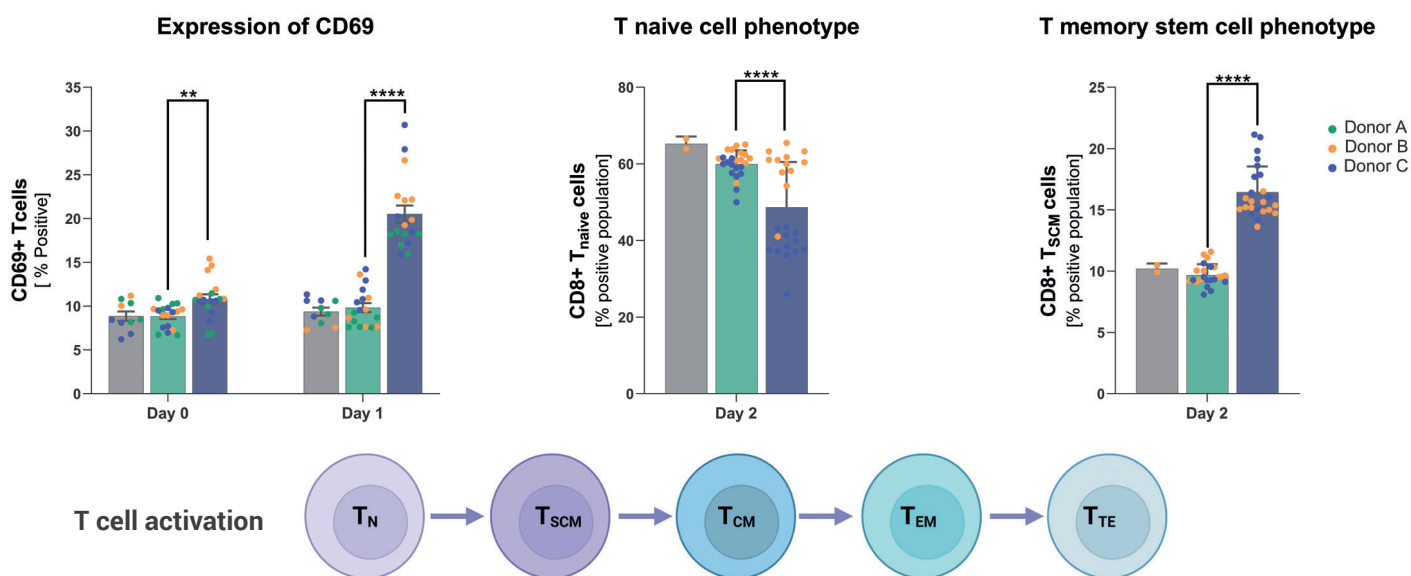


Activation-Free Transfection with Solupore®: Preserving Naïve T cell Phenotypes

Summary

Solupore transfection is designed to introduce genetic material into cells with minimal disruption, which is crucial for maintaining a naïve state in a lymphocyte population. CD69 is a marker of early T cell activation. This study compares Solupore transfection with Electroporation to assess their effects on T cell activation. The focus is on determining whether Solupore can transfect cells without triggering unwanted activation, thereby preserving the true naïve phenotype.



CD3+ T cells were thawed for 4 h and mock transfected without cargo using the Solupore Research Tool or electroporation. CD69 expression was analysed by flow cytometry immediately post-transfection, 24 h post-transfection and compared between Solupore and electroporation. T cell subset analysis of T_{NAIVE} and T_{SCM} was analysed 48 h post transfection.

Results & Discussions

These findings illustrate that Solupore transfection leads to minimal activation, with low CD69 expression levels. In contrast, Electroporation significantly increased CD69, indicating cell activation. Additionally, Solupore-transfected T cells retained a higher proportion of true naïve lymphocytes, while electroporation

