AUP513: Correlation plots for manuscript

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cc: Alicia Sato, Eva Chung

Overview

This report presents the correlations between CD4/CD8 T-cell responses measured through ICS assay and the B-cell response measured through BAMA, GTL ADCC and NAb assays for the groups receiving NYVAC-C-KC vaccines (Groups 5 and 6).

List of Figures

1 Summary

High number of positive correlations with BAMA, ADCC GTL and NAb assays are seen in CD4 as compared to CD8 T-cell population in groups receiving NYVAC-C-KC vaccines. Most of these correlations fail to be significant due to low sample size.

2 Statistical Methods

The T-cell responses from ICS assay were investigated for correlation with B-cell responses from BAMA, GTL ADCC and NAb assays at week 26 for the groups receiving NYVAC-C-KC vaccines (Groups 5 and 6). Specifically, the DMSO-adjusted percent positivity for each cytokine-antigen(pooled) combination for CD4 and CD8 T-cell populations were assessed for correlation with

1. AUC against gp120.TV1 antigen for the IgG subclass in the BAMA assay,
2. Titer against the gp120.TV1 antigen in the ADCC GTL assay, and
3. Titer against the MW965.26 isolate in the TZM.bl NAb assay.

Scatter plots (Figures 1-6) for each cytokine-antigen combination from the ICS assay were made against the B-cell assays for each group and T-cell population and annotated with Spearman's rank-order correlation. Significance of the correlations was derived using a one-sided p-value with the alternative that true correlation is greater than 0. A simple linear regression line was fit to the data for each Group and T-cell population.

Two summary plots (Figures 7 and 8) displayed the correlations of the B-cell assays with each cytokine-antigen combination in the ICS assay.

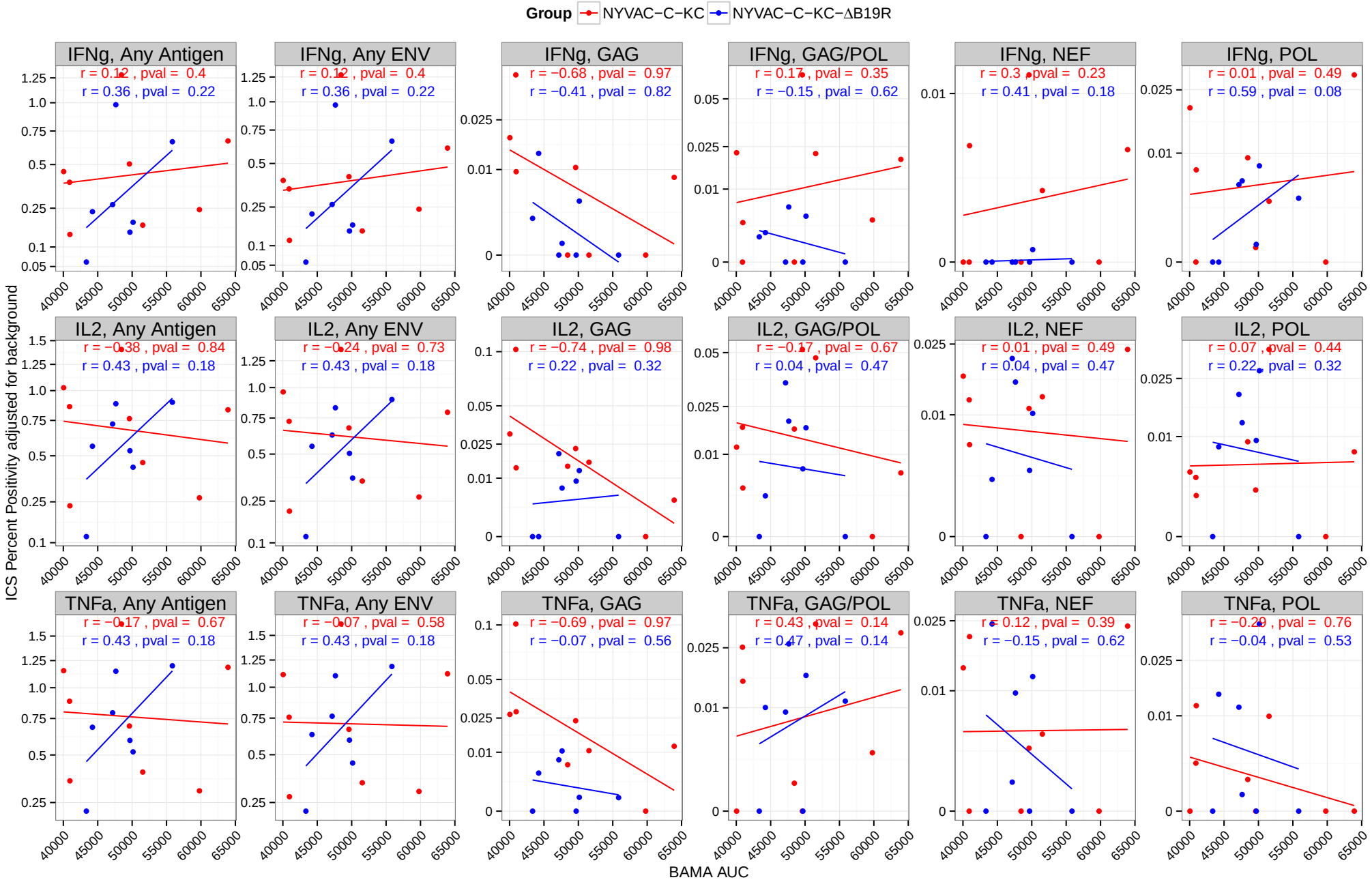

Figure 1: ICS v/s BAMA assay for CD4 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

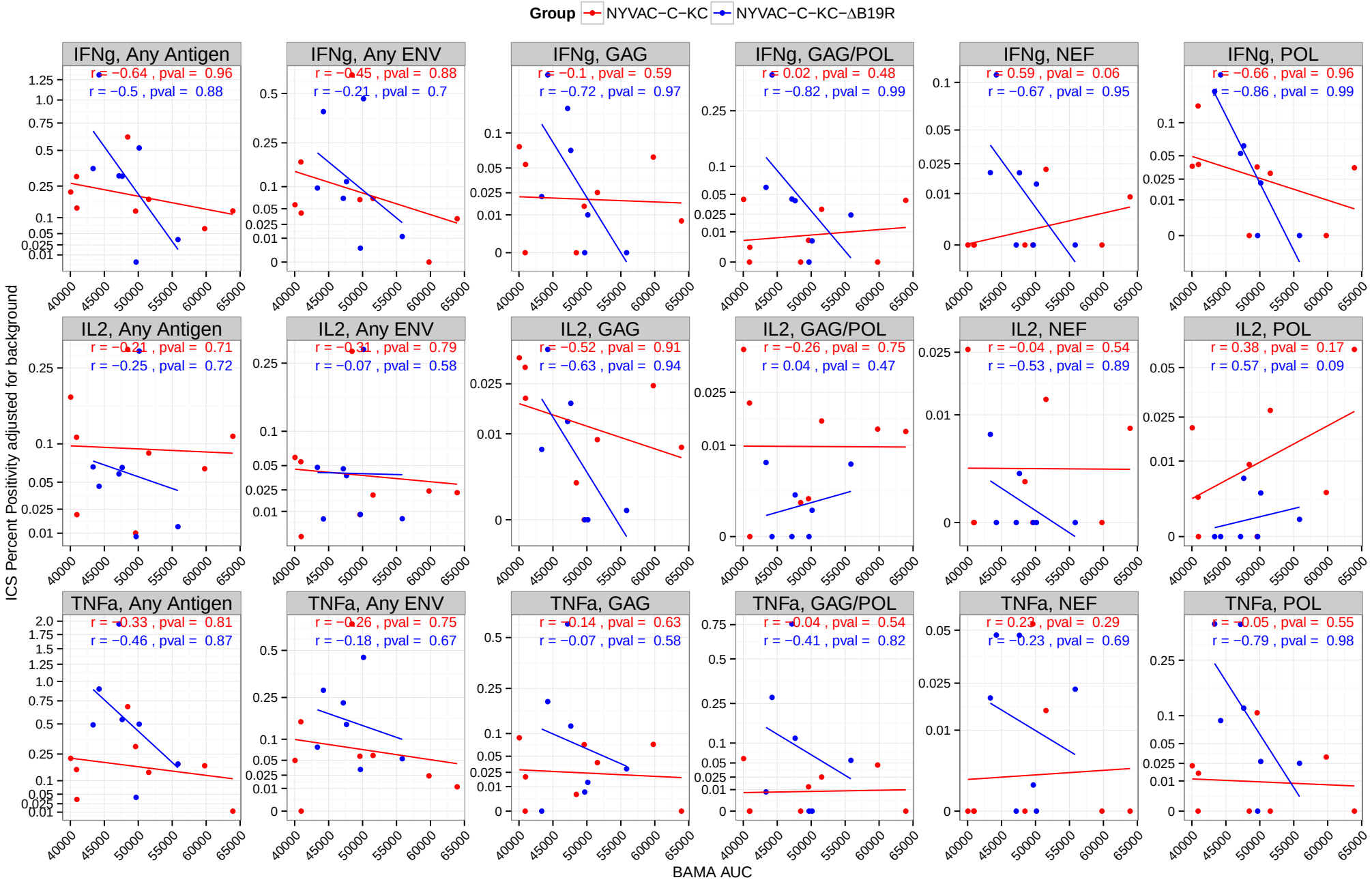

Figure 2: ICS v/s BAMA assay for CD8 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

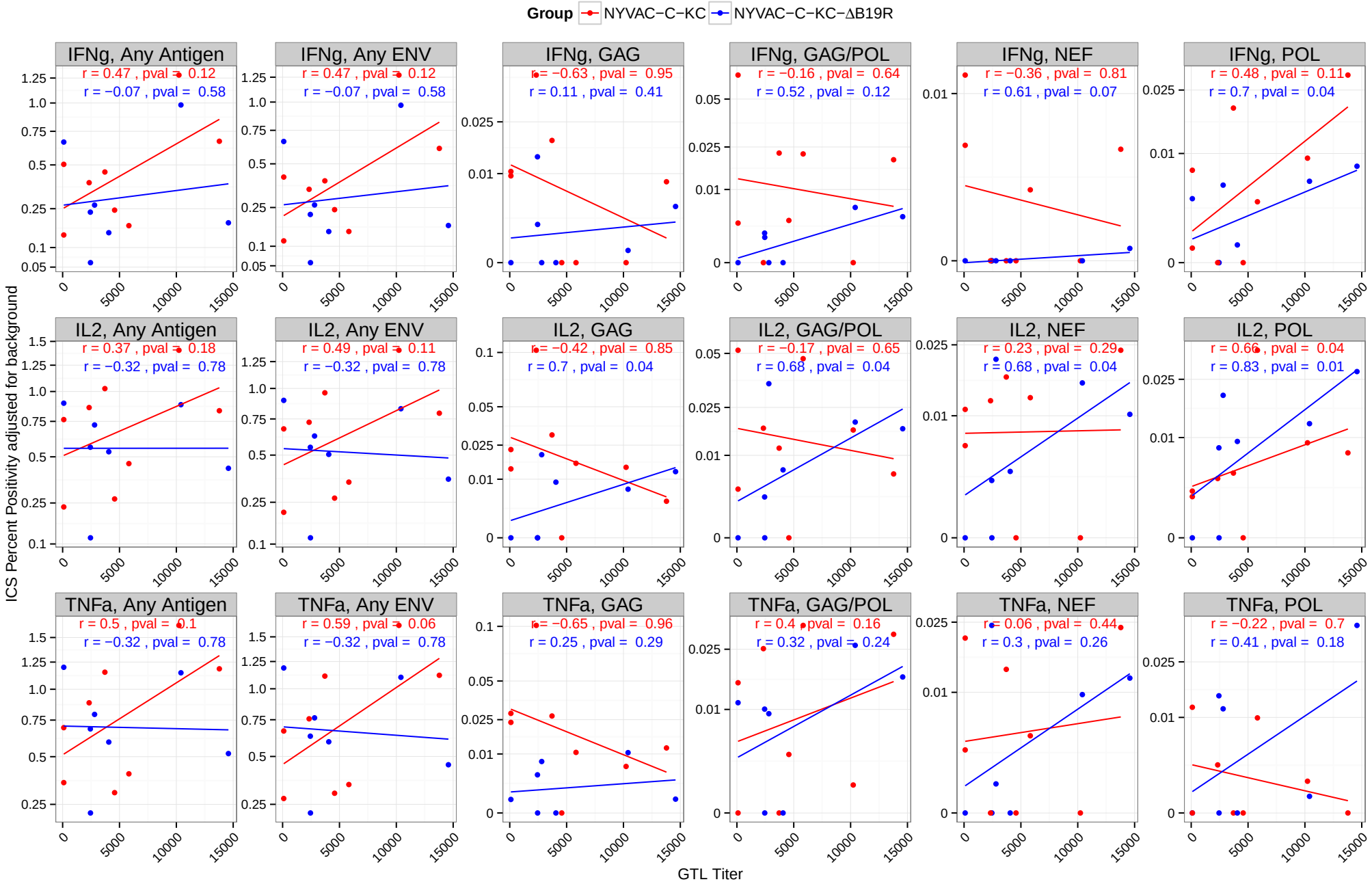

Figure 3: ICS v/s ADCC GTL assay for CD4 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

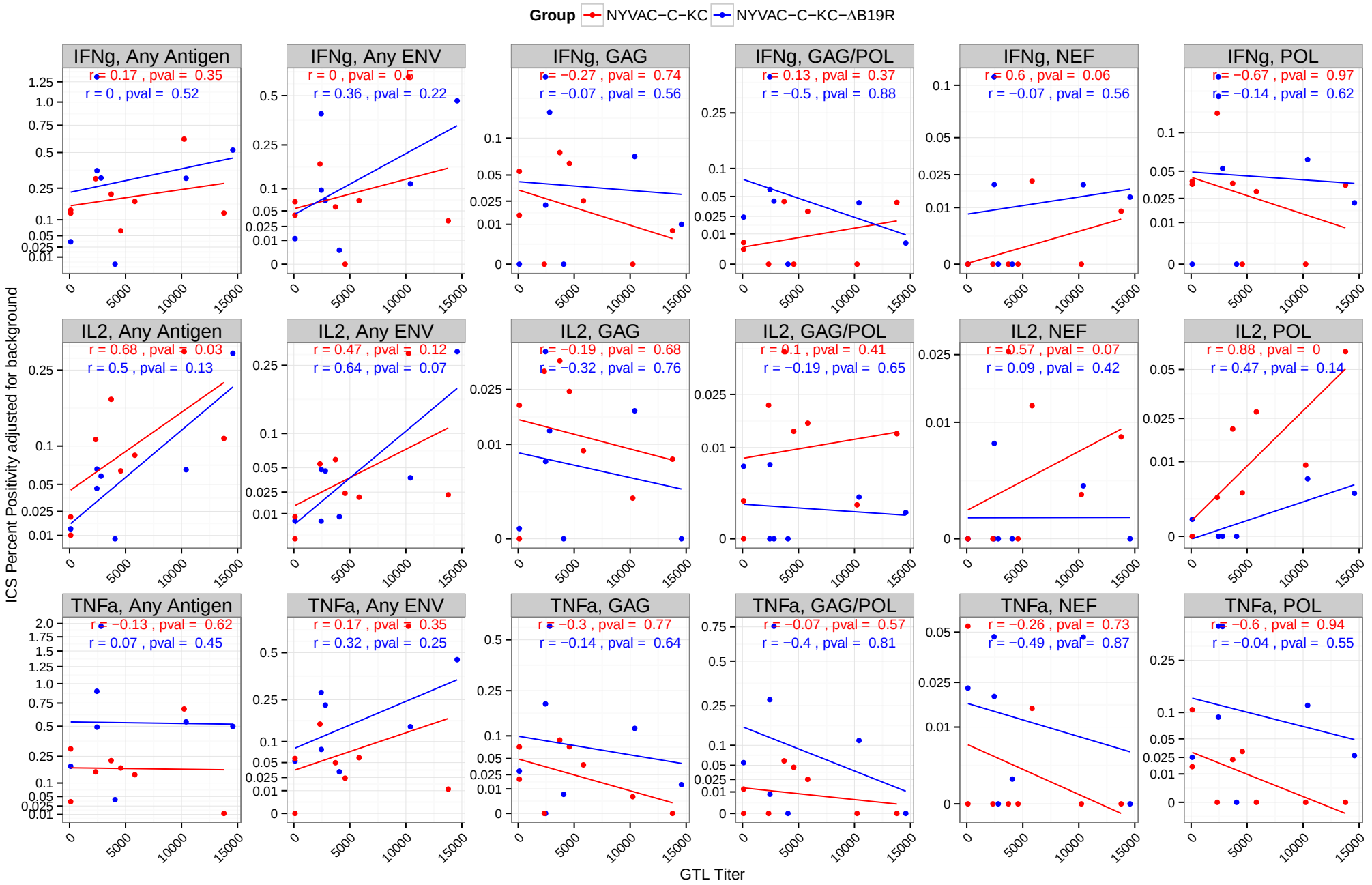

Figure 4: ICS v/s ADCC GTL assay for CD8 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

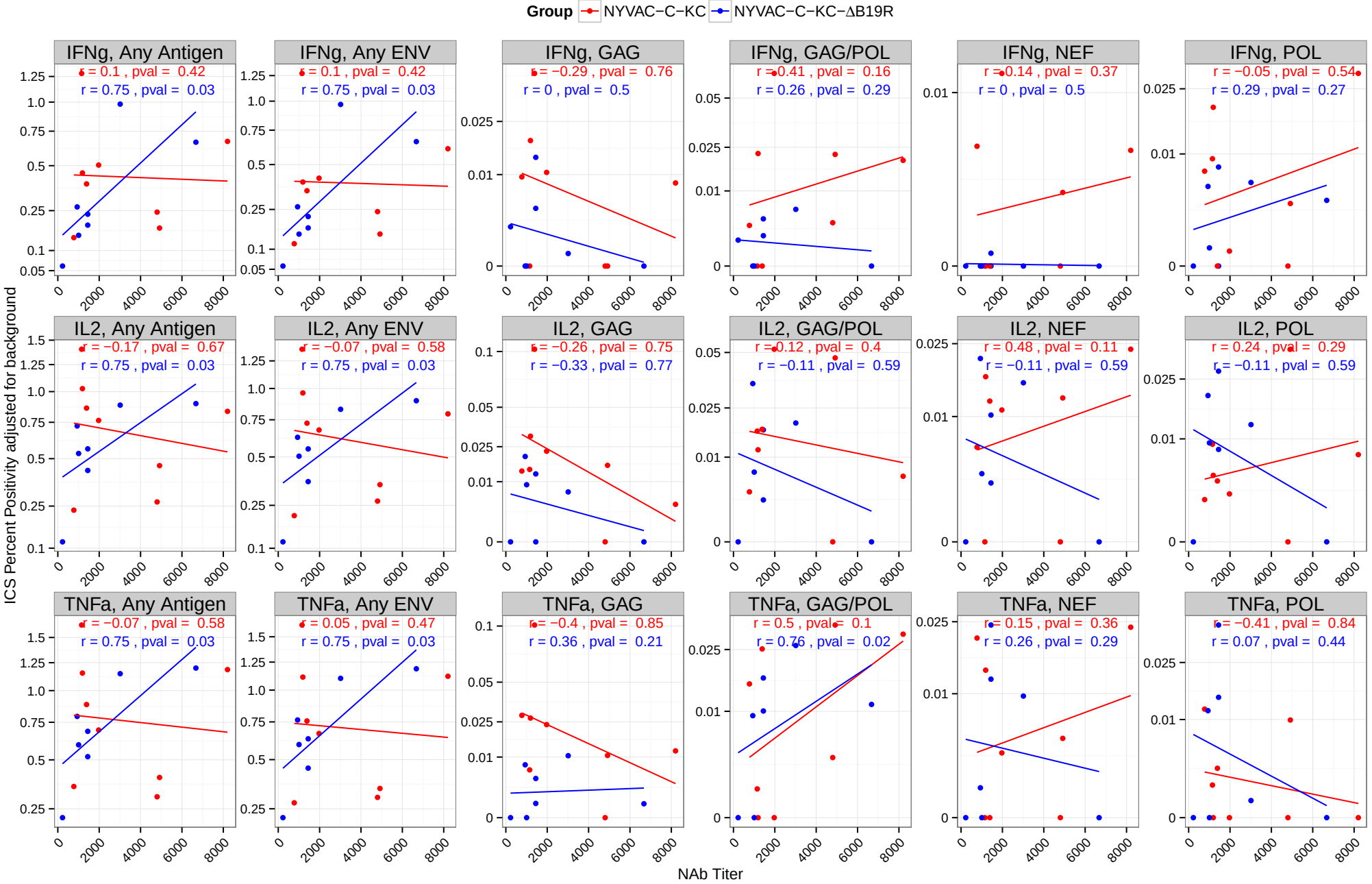

Figure 5: ICS v/s NAb assay for CD4 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

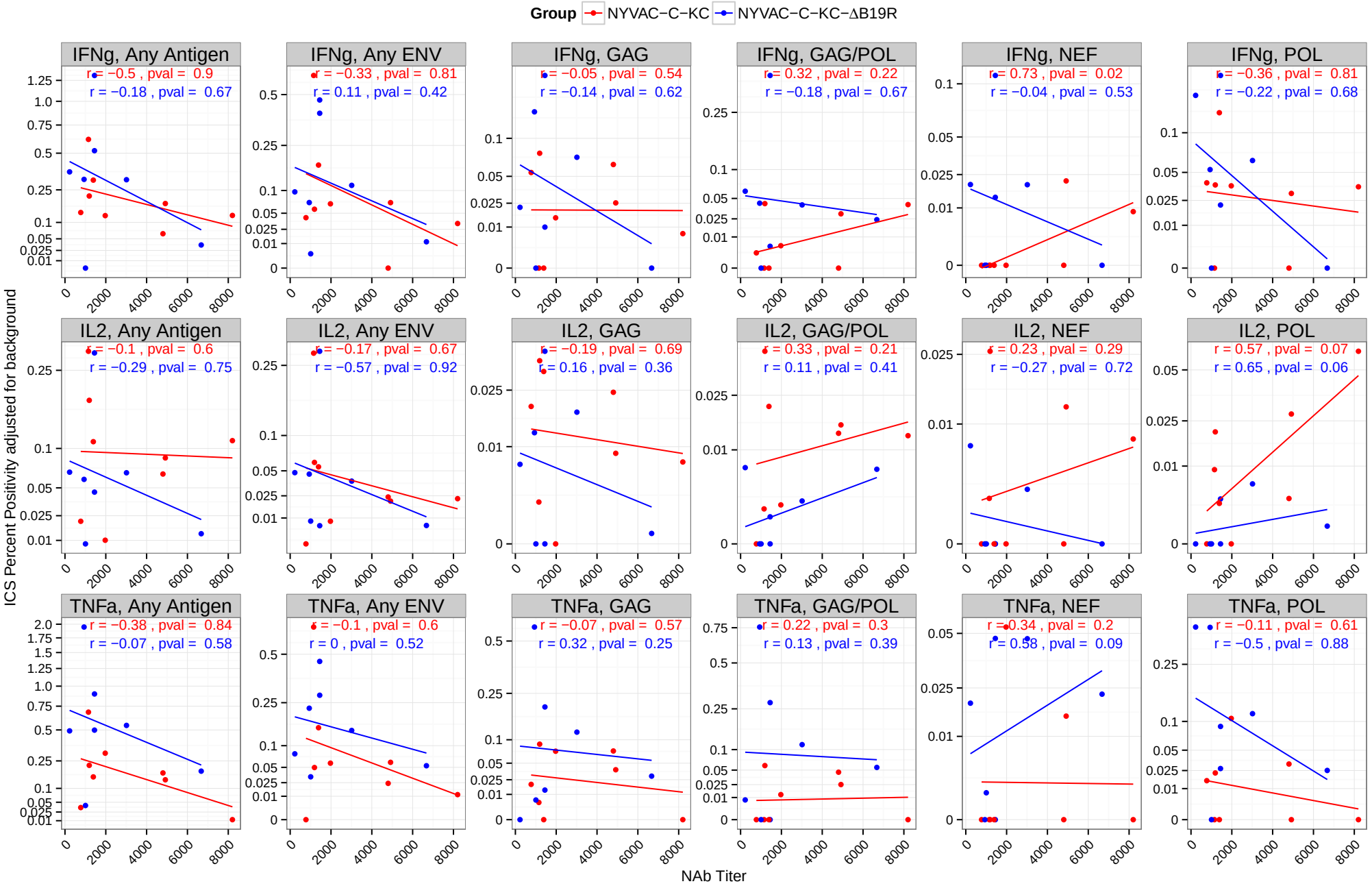

Figure 6: ICS v/s NAb assay for CD8 population by cytokine and pooled antigen colored by Group. The fitted simple linear regression line and Spearman correlation with one-sided p-value (alternative: true correlation is greater than 0) are indicated.

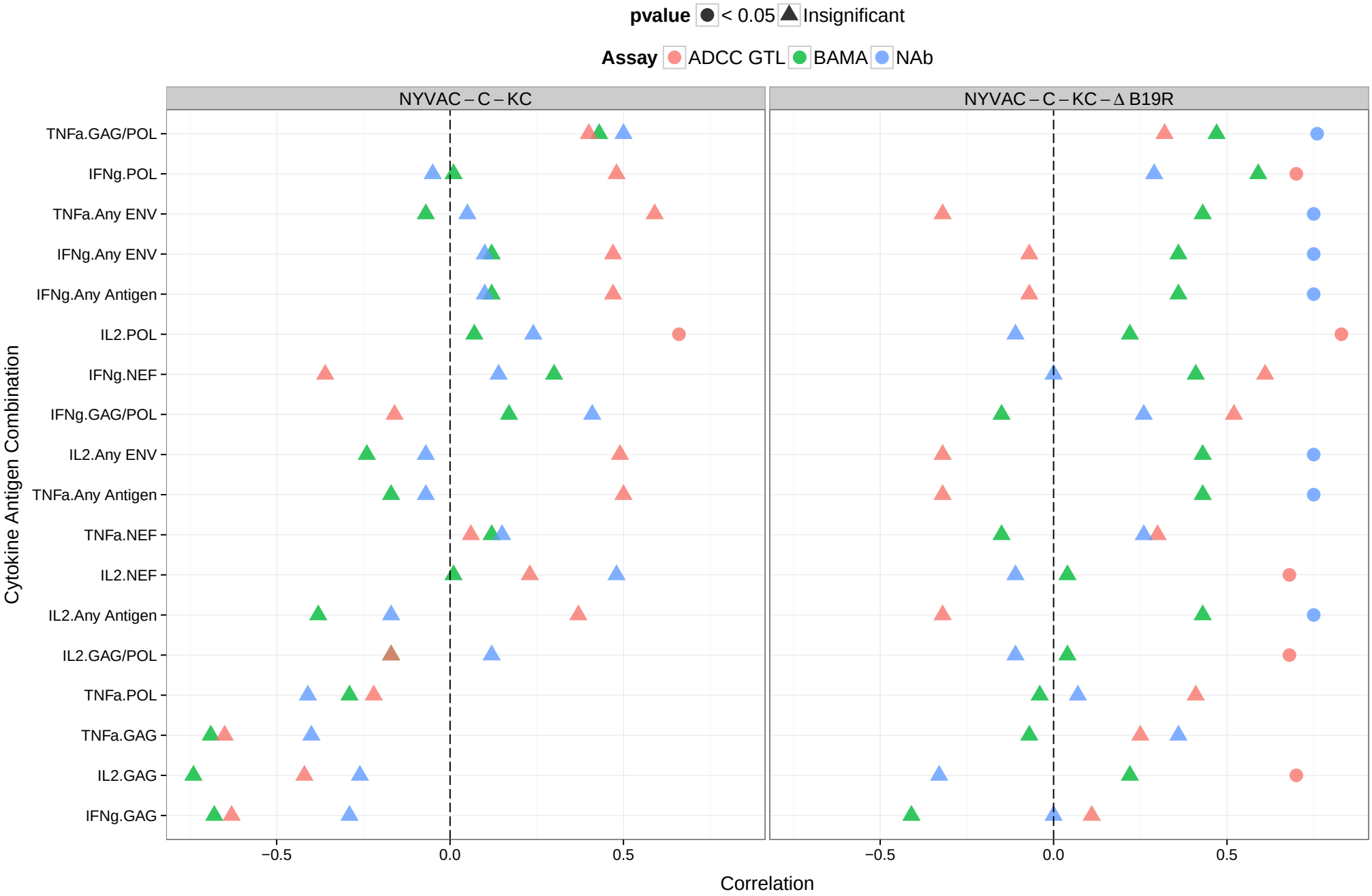

Figure 7: Plot summarizing correlation between T-cell ICS assay and B-cell assays in CD4 population faceted by Group and ordered by median correlation for each cytokine antigen combination.

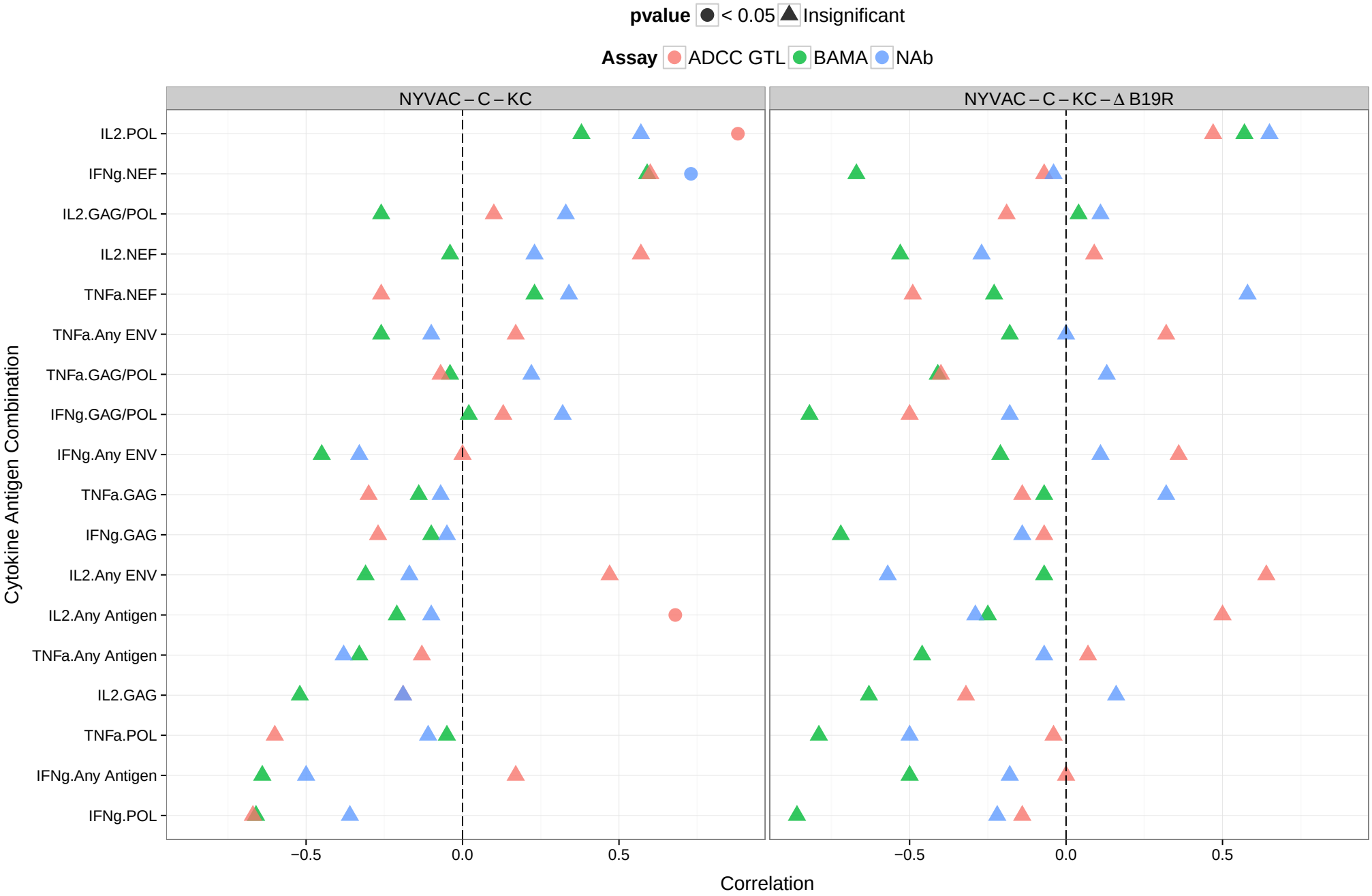

Figure 8: Plot summarizing correlation between T-cell ICS assay and B-cell assays in CD8 population faceted by Group and ordered by median correlation for each cytokine antigen combination.