TITLE: Proinsulin-specific T-cell responses correlate with estimated c-peptide and predict partial remission duration in type 1 diabetes

RUNNING TITLE: Proinsulin-specific T-cells as a T1D biomarker

SUPPLEMENTARY FIGURES AND TABLES
Table 1. Islet antibody status of participants

| Islet antibody                               | Healthy controls (16) | AB-negative FDR (9) | AB-positive FDR (17) |
|----------------------------------------------|-----------------------|---------------------|----------------------|
| Glutamic acid decarboxylase 65 (GAD65)       | 0                     | 0                   | 12 (71%)             |
| Islet tyrosine phosphatase-like protein (IA-2)| 0                     | 0                   | 9 (53%)              |
| Microinsulin (miaa)                          | 0                     | 0                   | 15 (88%)             |
| Islet cell (ICA)                             | 0                     | 0                   | 12 (71%)             |
| Zinc transporter 8 (ZnT8)                    | 0                     | 0                   | 9 (53%)              |
| >1 islet antibody                            | 0                     | 0                   | 11 (64%)             |
Supplementary Table 2. ROC, Receiver Operator Characteristic Curve analysis of T1D ≤ 3 months (n=22) and Healthy controls (n=12). CDI, Cell Division Index is calculated from the mean of unstimulated proliferation in triplicate experiments.

| Cell-Division Index | Sensitivity (%) | Specificity (%) |
|---------------------|-----------------|-----------------|
| > 2.0               | 91%             | 73%             |
| > 2.6               | 81%             | 73%             |
| > 2.9               | 77%             | 73%             |
| > 3.0               | 77%             | 81%             |
| > 3.5               | 63%             | 81%             |
Supplementary Figure 1. CD4+ T-cell proliferative responses to proinsulin33-63 relative to age for T1D subjects. ($r_s = -0.18$, $P = 0.11$). CDI was calculated from the mean of unstimulated proliferation in triplicate experiments. T1D ≤ 3 months, n= 32; T1D > 3 months, n = 40.
Supplementary Figure 2. CD4+ T cell proliferative responses to proinsulin\textsubscript{33-63} relative to months since diagnosis for T1D subjects. ($r_s = -0.47$, $P = 0.0005$).
Supplementary Figure 3. CD4+ T cell proliferative responses to proinsulin33-63 relative to number of islet antibodies for prediabetes subjects. (r² =0.14, P- = 0.58).