Supplementary Materials

**Table S1.** Age, sex adjusted multivariable regression analysis of immune checkpoints on B cell subsets with B2M.

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| --- | --- | --- | --- |
|  | **B2M** | **Gender** | **Age (years)** |
| **Coefficient Estimate (SE)** | ***p*-value** | **Coefficient Estimate (SE)** | ***p*-value** | **Coefficient Estimate (SE)** | ***p*-value** |
| PD-1 on B cells | 0.008 (0.011) | 0.454 | −2.811 (7.206) | 0.701 | −0.179 (0.276) | 0.524 |
| PD-1 on activated B cells | 0.008 (0.011) | 0.458 | −2.825 (7.192) | 0.699 | −0.179 (0.275) | 0.525 |
| PD-1 on memory B cells | 0.0008 (0.006) | 0.897 | −0.929 (3.900) | 0.815 | −0.018 (0.149) | 0.905 |
| CTLA-4 on B cells | 0.004 (0.002) | 0.098 | −0.171 (1.631) | 0.918 | −0.051 (0.062) | 0.426 |
| CTLA-4 on activated B cells | 0.004 (0.002) | 0.086 | −0.056 (1.548) | 0.972 | −0.049 (0.059) | 0.419 |
| CTLA-4 on memory B cells | 0.004 (0.002) | 0.086 | −0.056 (1.548) | 0.972 | −0.049 (0.059) | 0.419 |