

**Table S1: Typed IL2, IL2RA and CD247 SNPs**

| Locus            | SNP               | Position         | Coreferentiality<br>with <i>rs11575812</i><br>in unaffected<br>relatives |              | <i>IL2-IL2RA</i><br>Model<br>coefficient | <i>CD247-IL2RA</i><br>Model<br>coefficient | HWE*<br>P-value<br>(Controls) | Reported associations                                |  |
|------------------|-------------------|------------------|--|--------------|--|--|-------------------------------|--|--|
|                  |                   |                  |  |              |  |  |                               |  |  |
| <i>IL2</i>       | rs1479924         | 123607050        |  |              |  |  | 1.0                           |  |  |
|                  | <b>rs2069762</b>  | <b>123597430</b> |  |              | <b>+0.03</b>                             |  | 0.34                          |  |  |
|                  | <b>rs2069763</b>  | <b>123596932</b> |  |              | <b>-0.47</b>                             |  | 0.06                          | SLE (ref. 39)  |  |
|                  | rs2069778         | 123595585        |  |              |  |  | 1.0                           |  |  |
|                  | rs2069770         | 123593197        |  |              |  |  | 1.0                           |  |  |
|                  | rs2069772         | 123592583        |  |              |  |  | 0.19                          |  |  |
|                  | <b>rs11575812</b> | <b>123590499</b> |  |              | <b>-0.88</b>                             |  | 0.66                          |  |  |
|                  | rs6534347         | 123417885        |  |              |  |  | 0.09                          |  |  |
| <i>IL2RA</i>     | rs12251307        | 6163501          | -.20   |              |  |  | 0.04                          |  |  |
|                  | <b>rs11594656</b> | <b>6162015</b>   | <b>+0.52</b>   | <b>+0.14</b> | <b>+0.10</b>                             |  | 0.29                          | <b>T1D, suspected causal (ref. 40), MS (ref. 59)</b> |  |
|                  | rs41295061        | 6154666          | +0.07  |              |  |  | 0.10                          | T1D, suspected causal (ref. 40), MS (ref. 59)        |  |
|                  | rs7090530         | 6150881          | -.29   |              |  |  | 0.81                          |  |  |
|                  | rs4147359         | 6148445          | -.21   |              |  |  | 0.72                          |  |  |
|                  | <b>rs10795791</b> | <b>6148346</b>   | <b>+0.58</b>   |              | <b>-0.77</b>                             | <b>-0.74</b>                               | 0.85                          |  |  |
|                  | rs11597367        | 6147540          | -.35   |              |  |  | 0.65                          |  |  |
|                  | <b>rs7073236</b>  | <b>6146558</b>   | <b>-.55</b>  | <b>+0.51</b> | <b>+0.55</b>                             |  | 0.70                          |  |  |
|                  | rs7072793         | 6146272          | -.53   |              |  |  | 0.98                          |  |  |
|                  | rs2104286         | 6139051          | +0.30  |              |  |  | 0.15                          | RA and T1D (ref. 60), MS (ref. 59)                   |  |
|                  | <b>rs706778</b>   | <b>6138955</b>   | <b>+0.60</b>   | <b>+0.15</b> | <b>+0.21</b>                             |  | 0.39                          | <b>T1D (ref. 60)</b>                                 |  |
|                  | rs706779          | 6138830          | +0.15  |              |  |  | 0.41                          |  |  |
|                  | rs2256774         | 6137171          | +0.25  |              |  |  | 0.41                          |  |  |
|                  | rs10905669        | 6132099          | +0.13  |              |  |  | 0.79                          |  |  |
|                  | <b>rs791589</b>   | <b>6129577</b>   | <b>+0.56</b>   | <b>-0.33</b> | <b>-0.31</b>                             |  | 0.66                          |  |  |
|                  | rs791587          | 6128705          | -.15   |              |  |  | 0.20                          |  |  |
|                  | rs11256497        | 6127800          | +0.31  |              |  |  | 0.27                          |  |  |
|                  | rs706781          | 6126391          | -.13   |              |  |  | 0.19                          |  |  |
|                  | rs4749924         | 6122402          | -.06   |              |  |  | 1.0                           |  |  |
|                  | rs7072398         | 6119852          | -.21   |              |  |  | 1.0                           |  |  |
|                  | rs11256369        | 6106206          | -.01   |              |  |  | 1.0                           |  |  |
|                  | rs2076846         | 6103259          | -.02   |              |  |  | 0.98                          |  |  |
|                  | rs9663421         | 6095610          | -.23   |              |  |  | 0.03                          |  |  |
|                  | rs12244380        | 6093380          | +0.38  |              |  |  | 1.0                           |  |  |
|                  | rs12359875        | 6091513          | -.26   |              |  |  | 0.04                          |  |  |
|                  | <i>CD3z</i>       | rs2143302        | 165758811  |              |  |  |                               | 1.0  |  |
|                  |                   | <b>rs858535</b>  | <b>165758109</b>   |              |  |  | <b>+0.71</b>                  | 0.87   |  |
|                  |                   | rs863454         | 165755423  |              |  |  |                               | 0.89   |  |
| rs2982481        |                   | 165749930        |  |              |  |  | 0.40                          |  |  |
| rs1799704        |                   | 165742495        |  |              |  |  | 0.92                          |  |  |
| <b>rs1737506</b> |                   | <b>165740049</b> |  |              |  | <b>+0.03</b>                               | 0.96                          |  |  |
| rs858543         |                   | 165733922        |  |              |  |  | 0.32                          |  |  |
| rs10918706       |                   | 165732745        |  |              |  |  | 0.54                          |  |  |
| rs704848         |                   | 165728497        |  |              |  |  | 0.12                          |  |  |
| rs858545         |                   | 165728015        |  |              |  |  | 0.50                          |  |  |
| <b>rs863455</b>  |                   | <b>165724448</b> |  |              |  | <b>+0.70</b>                               | 0.22                          |  |  |
| rs858554         |                   | 165721538        |  |              |  |  | 0.29                          |  |  |
| rs16859085       |                   | 165719958        |  |              |  |  | 0.76                          |  |  |
| rs2949655        |                   | 165718474        |  |              |  |  | 0.23                          |  |  |
| rs1214611        |                   | 165715728        |  |              |  |  | 0.78                          |  |  |
| rs10918695       |                   | 165704577        |  |              |  |  | 0.02                          |  |  |
| rs12036775       |                   | 165703671        |  |              |  |  | 0.03                          |  |  |
| rs2995091        |                   | 165700901        |  |              |  |  | 0.02                          |  |  |
| rs1723015        |                   | 165699518        |  |              |  |  | 0.01                          |  |  |
| rs7523907        |                   | 165693871        |  |              |  |  | 0.06                          |  |  |
| rs2056626        |                   | 165687049        |  |              |  |  | 0.22                          |  |  |
| rs2995082        |                   | 165672869        |  |              |  |  | 1.0                           |  |  |
| rs1917534        |                   | 165663895        |  |              |  |  | 0.18                          |  |  |
| rs2949666        |                   | 165659326        |  |              |  |  | 0.54                          |  |  |

\*P-Value for Hardy-Weinberg equilibrium in control group