

**Supplementary Table S2** Descriptive analysis of normalized expression levels of the 92 selected proteins across all participants and within global cognitive function (GCF) categories

| Protein       | TOTAL            | I-GCF             | h-GCF            | p value* |
|---------------|------------------|-------------------|------------------|----------|
| Alpha-2-MRAP  | 8.59 (8.44,8.75) | 8.84 (8.58,9.11)  | 8.34 (8.20,8.47) | 0.001    |
| MDGA1         | 5.59 (5.46,5.72) | 5.75 (5.57,5.92)  | 5.42 (5.24,5.61) | 0.013    |
| Siglec-9      | 4.95 (4.89,5.01) | 5.02 (4.94,5.10)  | 4.88 (4.80,4.96) | 0.014    |
| HAGH          | 3.80 (3.64,3.95) | 3.98 (3.74,4.22)  | 3.61 (3.43,3.79) | 0.017    |
| EDA2R         | 4.75 (4.67,4.84) | 4.85 (4.71,4.98)  | 4.65 (4.55,4.75) | 0.021    |
| IL12          | 8.85 (8.73,8.97) | 8.98 (8.83,9.13)  | 8.72 (8.54,8.90) | 0.032    |
| MSR1          | 7.86 (7.80,7.92) | 7.93 (7.84,8.01)  | 7.79 (7.70,7.89) | 0.043    |
| SIGLEC1       | 6.74 (6.67,6.81) | 6.80 (6.70,6.91)  | 6.67 (6.57,6.76) | 0.053    |
| PDGF-R-alpha  | 6.38 (6.32,6.43) | 6.43 (6.35,6.51)  | 6.32 (6.25,6.40) | 0.061    |
| NBL1          | 5.45 (5.43,5.47) | 5.43 (5.40,5.46)  | 5.47 (5.44,5.49) | 0.074    |
| TNFRSF21      | 7.96 (7.92,7.99) | 7.99 (7.94,8.04)  | 7.93 (7.87,7.98) | 0.081    |
| FLRT2         | 3.00 (2.95,3.06) | 3.05 (2.97,3.13)  | 2.96 (2.89,3.02) | 0.082    |
| DRAXIN        | 3.97 (3.87,4.07) | 4.06 (3.92,4.20)  | 3.89 (3.74,4.03) | 0.086    |
| gal-8         | 6.14 (6.00,6.27) | 6.25 (6.02,6.47)  | 6.02 (5.89,6.16) | 0.096    |
| GZMA          | 7.06 (6.94,7.17) | 7.15 (6.95,7.35)  | 6.96 (6.84,7.08) | 0.101    |
| GFR-alpha-1   | 7.30 (7.23,7.36) | 7.35 (7.25,7.45)  | 7.24 (7.16,7.33) | 0.101    |
| THY 1         | 9.93 (9.89,9.97) | 9.96 (9.90,10.02) | 9.90 (9.85,9.95) | 0.105    |
| CD200R1       | 5.33 (5.27,5.40) | 5.38 (5.30,5.47)  | 5.28 (5.19,5.37) | 0.107    |
| KYNU          | 9.47 (9.34,9.59) | 9.57 (9.37,9.76)  | 9.36 (9.21,9.52) | 0.108    |
| EFNA4         | 3.33 (3.27,3.39) | 3.38 (3.29,3.46)  | 3.28 (3.20,3.36) | 0.109    |
| NEP           | 3.28 (3.14,3.42) | 3.17 (2.97,3.37)  | 3.39 (3.20,3.58) | 0.114    |
| NAAA          | 3.24 (3.09,3.39) | 3.36 (3.10,3.62)  | 3.13 (2.98,3.27) | 0.124    |
| N2DL-2        | 3.97 (3.90,4.05) | 4.03 (3.92,4.14)  | 3.92 (3.82,4.02) | 0.126    |
| PVR           | 8.58 (8.52,8.64) | 8.63 (8.55,8.71)  | 8.54 (8.45,8.62) | 0.133    |
| SCARA5        | 8.80 (8.77,8.84) | 8.83 (8.78,8.89)  | 8.78 (8.72,8.83) | 0.134    |
| TMPRSS5       | 3.43 (3.36,3.49) | 3.48 (3.39,3.56)  | 3.38 (3.27,3.48) | 0.137    |
| RSPO1         | 3.71 (3.64,3.78) | 3.76 (3.66,3.87)  | 3.66 (3.57,3.75) | 0.157    |
| SCARF2        | 7.04 (6.98,7.09) | 7.08 (6.99,7.16)  | 7.00 (6.93,7.07) | 0.172    |
| GCP5          | 4.69 (4.58,4.79) | 4.76 (4.59,4.92)  | 4.61 (4.49,4.74) | 0.172    |
| PLXNB3        | 4.21 (4.12,4.31) | 4.28 (4.11,4.45)  | 4.15 (4.06,4.23) | 0.179    |
| TNFRSF12A     | 4.97 (4.89,5.04) | 5.02 (4.91,5.13)  | 4.92 (4.81,5.02) | 0.181    |
| GDNFR-alpha-3 | 5.23 (5.17,5.30) | 5.28 (5.18,5.37)  | 5.19 (5.10,5.28) | 0.186    |
| NTRK2         | 6.21 (6.18,6.25) | 6.24 (6.19,6.28)  | 6.19 (6.14,6.24) | 0.191    |
| NRP2          | 8.34 (8.33,8.36) | 8.33 (8.31,8.36)  | 8.35 (8.33,8.38) | 0.195    |
| JAM-B         | 7.91 (7.84,7.98) | 7.95 (7.85,8.05)  | 7.87 (7.78,7.96) | 0.199    |

|                  |                  |                  |                  |       |
|------------------|------------------|------------------|------------------|-------|
| CRTAM            | 6.06 (5.97,6.15) | 6.11 (5.99,6.24) | 6.00 (5.88,6.12) | 0.199 |
| LXN <sup>a</sup> | 1.48 (1.40,1.56) | 1.53 (1.38,1.68) | 1.43 (1.39,1.47) | 0.201 |
| CLEC1B           | 8.94 (8.78,9.10) | 9.04 (8.78,9.30) | 8.84 (8.66,9.02) | 0.215 |
| EZR              | 5.84 (5.77,5.91) | 5.88 (5.76,6.00) | 5.79 (5.71,5.88) | 0.223 |
| TN-R             | 3.62 (3.55,3.69) | 3.67 (3.56,3.77) | 3.58 (3.47,3.68) | 0.235 |
| SCARB2           | 5.18 (5.11,5.25) | 5.22 (5.12,5.31) | 5.14 (5.04,5.23) | 0.241 |
| NMNAT1           | 4.07 (3.80,4.35) | 4.24 (3.78,4.69) | 3.91 (3.59,4.23) | 0.242 |
| FcRL2            | 5.57 (5.47,5.66) | 5.62 (5.47,5.76) | 5.51 (5.38,5.64) | 0.276 |
| SKR3             | 7.57 (7.51,7.63) | 7.60 (7.51,7.69) | 7.53 (7.45,7.62) | 0.277 |
| LAT              | 5.62 (5.36,5.88) | 5.76 (5.34,6.18) | 5.48 (5.17,5.80) | 0.292 |
| Dkk-4            | 4.39 (4.31,4.48) | 4.44 (4.33,4.56) | 4.35 (4.21,4.49) | 0.297 |
| PLXNB1           | 2.24 (2.00,2.49) | 2.12 (1.88,2.35) | 2.37 (1.94,2.81) | 0.305 |
| CPA2             | 9.69 (9.59,9.80) | 9.75 (9.59,9.90) | 9.64 (9.50,9.78) | 0.309 |
| LAIR-2           | 5.22 (4.99,5.45) | 5.33 (5.03,5.64) | 5.10 (4.76,5.45) | 0.323 |
| DDR1             | 7.40 (7.35,7.45) | 7.42 (7.36,7.49) | 7.38 (7.31,7.45) | 0.356 |
| CTSS             | 5.51 (5.48,5.55) | 5.53 (5.47,5.59) | 5.50 (5.46,5.54) | 0.356 |
| GDNF             | 2.57 (2.48,2.66) | 2.61 (2.49,2.73) | 2.53 (2.40,2.66) | 0.382 |
| BMP-4            | 4.82 (4.69,4.95) | 4.77 (4.58,4.95) | 4.88 (4.69,5.07) | 0.384 |
| GM-CSF-R-alpha   | 5.84 (5.72,5.97) | 5.90 (5.73,6.06) | 5.79 (5.60,5.97) | 0.389 |
| CD38             | 5.98 (5.90,6.07) | 6.02 (5.91,6.13) | 5.95 (5.83,6.07) | 0.395 |
| SMOC2            | 8.72 (8.64,8.79) | 8.69 (8.58,8.80) | 8.75 (8.65,8.85) | 0.422 |
| CNTN5            | 6.57 (6.50,6.64) | 6.54 (6.44,6.64) | 6.60 (6.49,6.71) | 0.431 |
| IL-5R-alpha      | 4.60 (4.49,4.71) | 4.64 (4.49,4.78) | 4.55 (4.39,4.72) | 0.451 |
| CTSC             | 3.90 (3.81,3.99) | 3.93 (3.78,4.08) | 3.87 (3.77,3.97) | 0.462 |
| Nr-CAM           | 9.86 (9.83,9.89) | 9.87 (9.83,9.91) | 9.85 (9.81,9.89) | 0.483 |
| CADM3            | 3.87 (3.77,3.96) | 3.90 (3.77,4.03) | 3.83 (3.70,3.96) | 0.484 |
| N-CDase          | 4.68 (4.58,4.78) | 4.72 (4.58,4.85) | 4.64 (4.49,4.80) | 0.485 |
| LAYN             | 6.67 (6.60,6.75) | 6.70 (6.59,6.82) | 6.65 (6.54,6.75) | 0.485 |
| PRTG             | 6.39 (6.33,6.44) | 6.40 (6.33,6.48) | 6.37 (6.29,6.45) | 0.497 |
| NCAN             | 8.66 (8.60,8.71) | 8.67 (8.61,8.74) | 8.64 (8.55,8.72) | 0.507 |
| SPOCK1           | 3.12 (3.07,3.18) | 3.14 (3.06,3.22) | 3.10 (3.03,3.18) | 0.515 |
| GDF-8            | 4.07 (3.97,4.17) | 4.10 (3.96,4.24) | 4.04 (3.89,4.18) | 0.527 |
| SMPD1            | 5.35 (5.27,5.42) | 5.37 (5.25,5.49) | 5.32 (5.22,5.42) | 0.542 |
| EPHB6            | 5.01 (4.95,5.08) | 5.03 (4.93,5.13) | 4.99 (4.90,5.09) | 0.562 |
| CLM-1            | 7.22 (7.10,7.33) | 7.18 (6.99,7.38) | 7.25 (7.12,7.38) | 0.572 |
| CDH3             | 7.58 (7.51,7.65) | 7.60 (7.49,7.70) | 7.56 (7.46,7.65) | 0.576 |
| ADAM 22          | 5.52 (5.44,5.60) | 5.54 (5.42,5.66) | 5.50 (5.38,5.61) | 0.588 |
| UNC5C            | 5.12 (5.05,5.18) | 5.13 (5.04,5.22) | 5.10 (5.01,5.18) | 0.598 |
| ROBO2            | 5.68 (5.62,5.74) | 5.69 (5.60,5.78) | 5.66 (5.58,5.74) | 0.598 |

|                       |                     |                     |                     |       |
|-----------------------|---------------------|---------------------|---------------------|-------|
| G-CSF                 | 4.42 (4.35,4.50)    | 4.44 (4.33,4.56)    | 4.40 (4.29,4.52)    | 0.631 |
| VWC2                  | 6.01 (5.93,6.09)    | 6.03 (5.91,6.15)    | 5.99 (5.88,6.11)    | 0.640 |
| WFIKKN1               | 3.56 (3.50,3.62)    | 3.57 (3.48,3.66)    | 3.54 (3.46,3.62)    | 0.646 |
| CPM                   | 8.33 (8.29,8.37)    | 8.32 (8.25,8.39)    | 8.34 (8.30,8.38)    | 0.656 |
| MATN3                 | 9.60 (9.52,9.69)    | 9.58 (9.47,9.70)    | 9.62 (9.49,9.75)    | 0.659 |
| ADAM 23               | 5.10 (4.99,5.20)    | 5.12 (4.95,5.28)    | 5.07 (4.95,5.19)    | 0.677 |
| MANF                  | 6.11 (5.87,6.35)    | 6.16 (5.80,6.52)    | 6.07 (5.74,6.40)    | 0.703 |
| CLM-6                 | 6.30 (6.26,6.35)    | 6.31 (6.24,6.38)    | 6.29 (6.23,6.36)    | 0.738 |
| BCAN                  | 4.78 (4.71,4.85)    | 4.79 (4.70,4.89)    | 4.77 (4.66,4.88)    | 0.762 |
| RGMA                  | 10.89 (10.84,10.95) | 10.89 (10.80,10.97) | 10.90 (10.83,10.98) | 0.770 |
| sFRP-3                | 5.99 (5.95,6.04)    | 6.00 (5.93,6.07)    | 5.99 (5.92,6.05)    | 0.784 |
| MAPT <sup>a</sup>     | 0.94 (0.88,1.00)    | 0.93 (0.87,1.00)    | 0.95 (0.85,1.05)    | 0.798 |
| NTRK3                 | 7.71 (7.66,7.76)    | 7.71 (7.64,7.78)    | 7.72 (7.65,7.79)    | 0.843 |
| RGMB                  | 7.09 (7.02,7.16)    | 7.10 (6.99,7.20)    | 7.08 (6.99,7.18)    | 0.860 |
| CLEC10A               | 6.05 (5.97,6.13)    | 6.06 (5.93,6.19)    | 6.05 (5.95,6.15)    | 0.876 |
| CD200                 | 6.54 (6.48,6.61)    | 6.55 (6.46,6.63)    | 6.54 (6.45,6.63)    | 0.936 |
| CDH6                  | 4.78 (4.74,4.82)    | 4.78 (4.73,4.83)    | 4.78 (4.73,4.83)    | 0.983 |
| Beta-NGF <sup>a</sup> | 0.31 (0.29,0.32)    | 0.31 (0.29,0.33)    | 0.31 (0.29,0.33)    | 0.985 |

Descriptive data are expressed as the mean (confidence interval).

\* Each *p* value was calculated using Student's *t* test.

<sup>a</sup> Proteins with a high percentage (>98%) of data values below the limit of detection (LOD).