**Supplementary information**

**Quantitative visualization of the interaction between complement component C1 and immunoglobulin G: The effect of CH1 domain deletion**

Saeko Yanaka 1,2,†, Shigetaka Nishiguchi 1,†, Rina Yogo 1,2,†,#, Hiroki Watanabe 1, Jiana Shen 1,2, Hirokazu Yagi 2, Takayuki Uchihashi 1,3,\*, and Koichi Kato 1,2,\*

1 Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences, 5-1 Higashiyama, Myodaiji, Okazaki, 444-8787, Japan; saeko-yanaka@ims.ac.jp, shigetaka-nishiguchi@ims.ac.jp, yogo@ims.ac.jp, hwatanabe0205@gmail.com, skana@ims.ac.jp

2 Faculty and Graduate School of Pharmaceutical Sciences, Nagoya City University, 3-1 Tanabe-dori, Mizuho-ku, Nagoya, Aichi, 467-8603, Japan; hyagi@phar.nagoya-cu.ac.jp,

3 Department of Physics, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8602, Japan

† These three authors contributed equally to this work.

# Current address: Biomedical Research Centre, School of Biomedical Engineering The University of British Columbia 2222 Health Sciences Mall, Vancouver, BC Canada V6T 1Z3

\* Correspondence: uchihast@d.phys.nagoya-u.ac.jp (T.U.); kkatonmr@ims.ac.jp (K.K.)

**Supplementary movie legends**

Supplementary Movie S1: HS-AFM movie of C1

Captured at a scanning speed of 0.3 s/frame. Scan area: 50 nm × 50 nm. Pixel size: 50 × 50 pixels2.

Supplementary Movie S2: HS-AFM movie of C1q

Captured at a scanning speed of 0.3 s/frame. Scan area: 50 nm × 50 nm. Pixel size: 50 × 50 pixels2.

Supplementary Movie S3: HS-AFM movie of IgG2a(s)

Captured at a scanning speed of 0.3 s/frame. Scan area: 40 nm × 40 nm. Pixel size: 62 × 62 pixels2.

Supplementary Movie S4: HS-AFM movie of IgG2a

Captured at a scanning speed of 0.3 s/frame. Scan area: 40 nm × 40 nm. Pixel size: 62 × 62 pixels2.

Supplementary Movie S5: HS-AFM movie of IgG2a(s) interacting with C1

Captured at a scanning speed of 1 s/frame. Scan area: 149 nm × 149 nm. Pixel size: 57 × 57 pixels2.

Supplementary Movie S6: HS-AFM movie of IgG2a(s) interacting with C1q

(a) Captured at a scanning speed of 1 s/frame. Scan area: 149 nm × 149 nm. Pixel size: 57 × 57 pixels2. (b) Captured at a scanning speed of 0.15 s/frame. Scan area: 150 nm × 105 nm. Pixel size: 120 × 84 pixels2.

Supplementary Movie S7: HS-AFM movie of CL interacting with C1

Captured at a scanning speed of 1 s/frame. Scan area: 200 nm × 200 nm. Pixel size: 150 × 150 pixels2.

Supplementary Movie S8: HS-AFM movie of CL interacting with C1q

Captured at a scanning speed of 1 s/frame. Scan area: 200 nm × 200 nm. Pixel size: 150 × 150 pixels2.

Supplementary Movie S9: HS-AFM movie of VHH interacting with C1

Captured at a scanning speed of 1 s/frame. Scan area: 200 nm × 200 nm. Pixel size: 150 × 150 pixels2.

Supplementary Movie S10: HS-AFM movie of VHH interacting with C1q

Captured at a scanning speed of 1 s/frame. Scan area: 200 nm × 200 nm. Pixel size: 150 × 150 pixels2.