Supporting Information

Effects of Hydrophobicity and Electrostatic Charge on Complement Activation by Amino Groups

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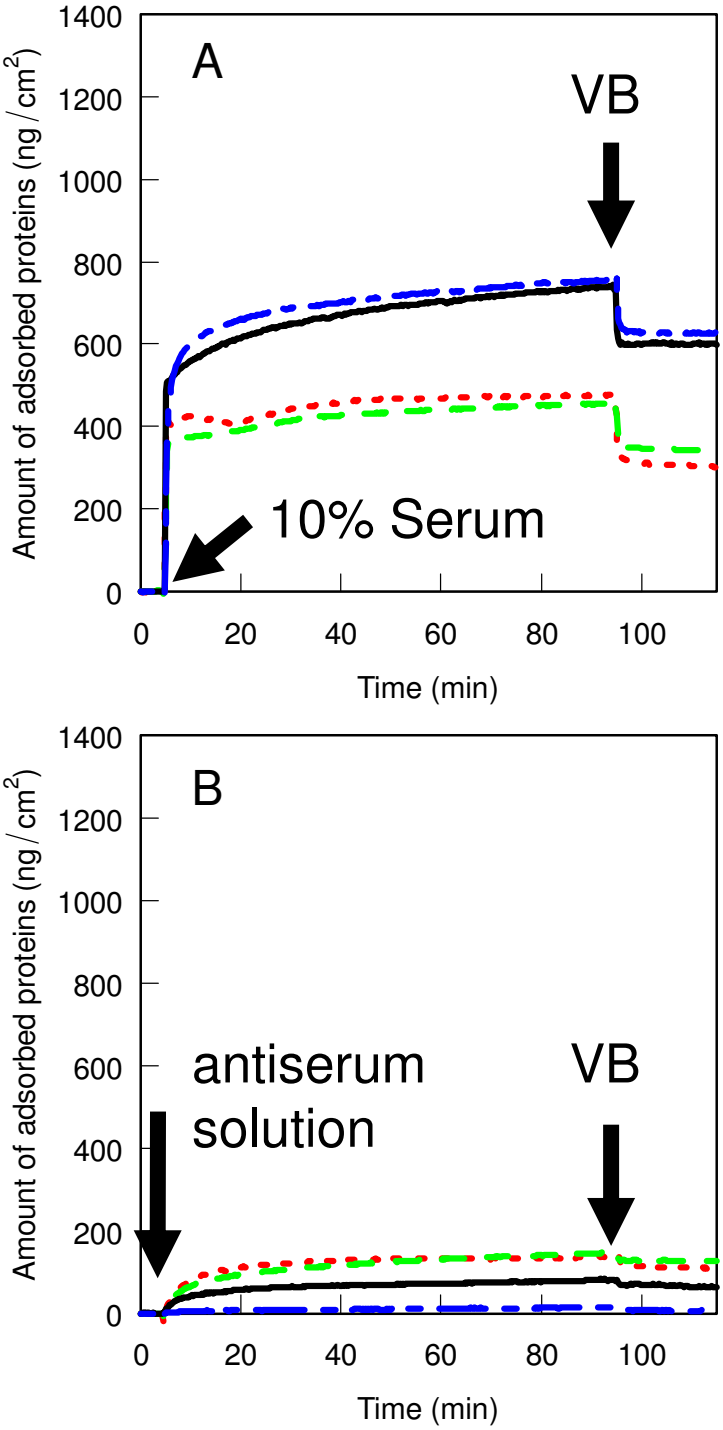

Figure S1. SPR sensorgrams during exposure of 10% NHS (A) and 1% anti-C3b antiserum (B) to a series of NH_2/CH_3 mixed SAM surfaces. (colored edition) : (· · · ·) NH_2/CH_3=0/100, (– –) NH_2/CH_3=45/55, (———) NH_2/CH_3=100/0, (- ———) NH_2/CH_3=100/0 with 10 mM EDTA supplemented 10% NHS.

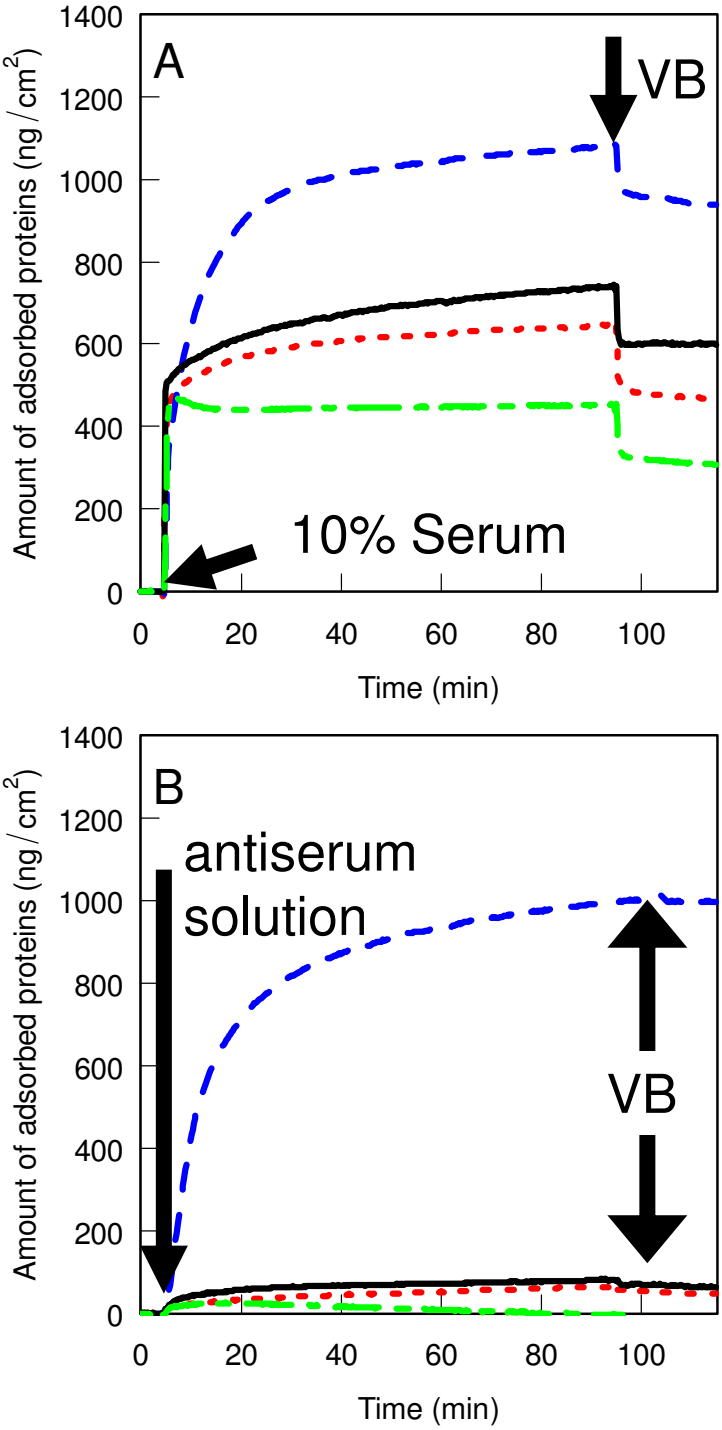

Figure S2. SPR sensorgrams during exposure of 10% NHS (A) and 1% anti-C3b antiserum (B) to a series of NH_2/COOH mixed SAM surfaces. (colored edition) : (· · · ·) NH_2/COOH=0/100, (— —), NH_2/COOH=55/45, (———) NH_2 100%, and (- —) NH_2/COOH=55/45 with 10 mM EDTA supplemented 10% NHS. NH_2 100% was the same as for Figure 2. Error bars represent ± SEM (n=3).

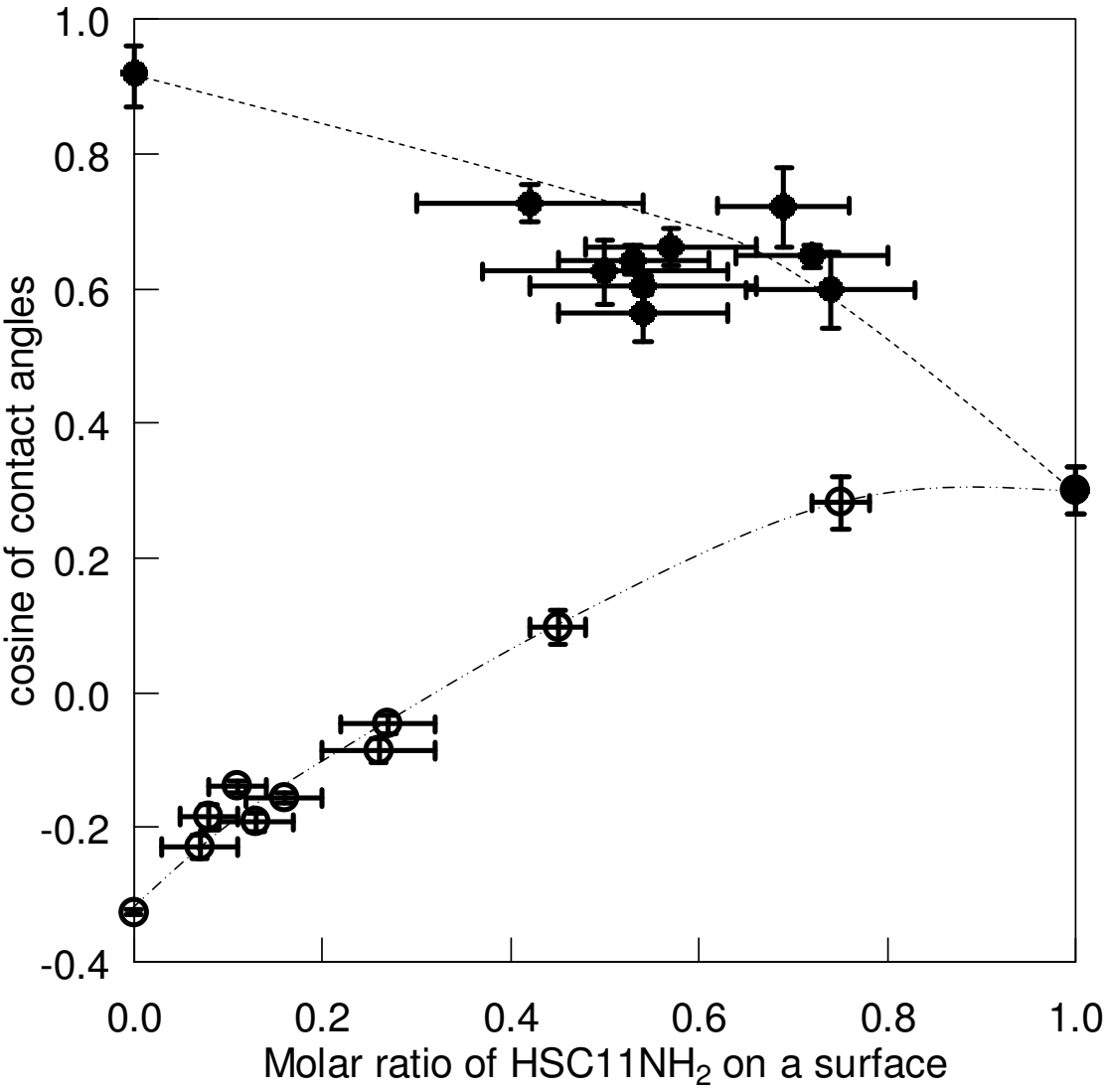

Figure S3. Cosine of contact angles of two series of mixed SAMs, amino/methyl or amino/carboxy terminated alkanethiols, with different densities of surface amino groups. (○): Mixed SAMs of 11-amino-1-undecanethiol (NH_2) and 1-Dodecanethiol. (●): Mixed SAMs of 11-amino-1-undecanethiol (NH_2) and 11-mercaptoundecanoic acid. Error bars represent ± SEM (n=3).

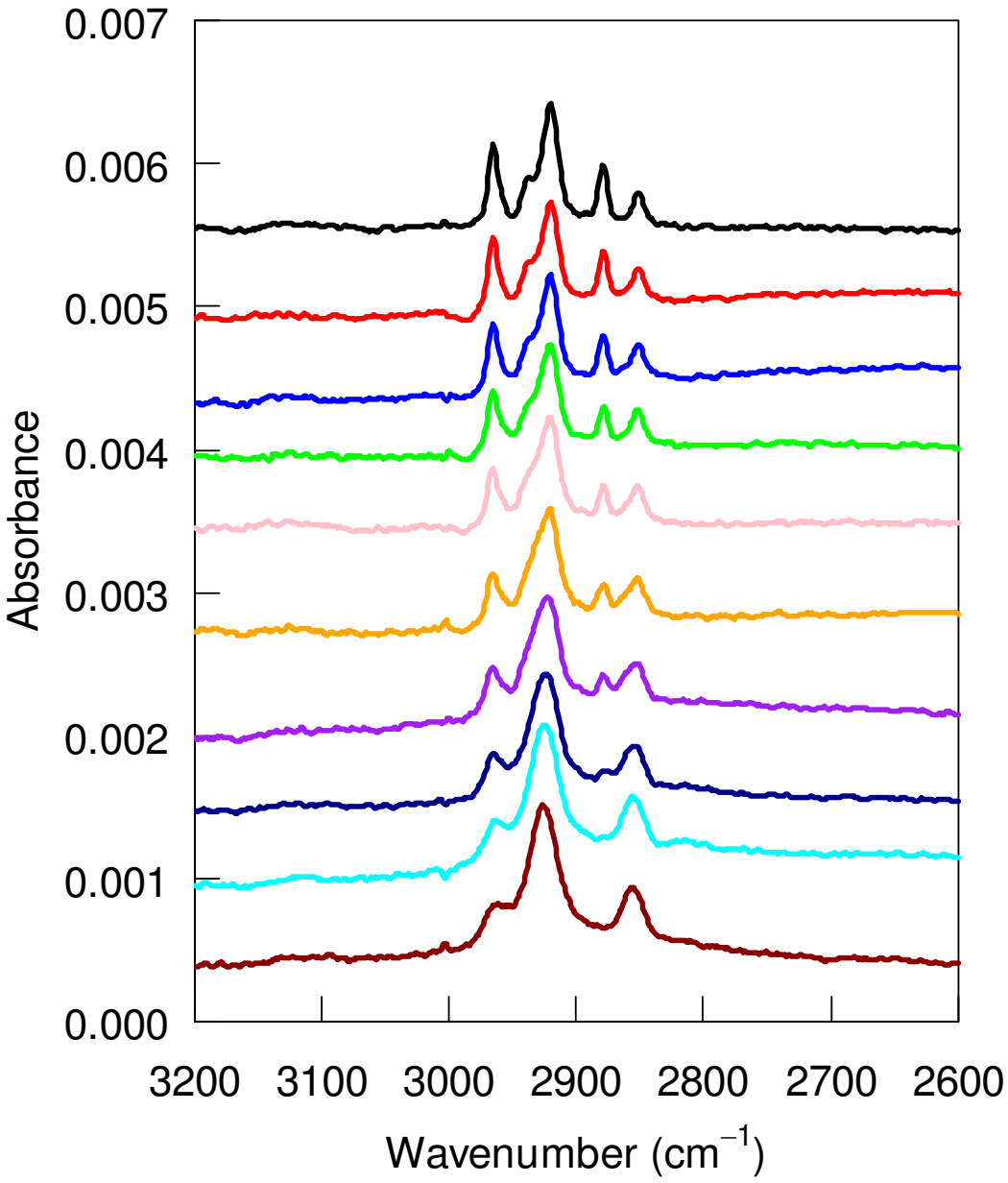

Figure. S4. FTIR spectra for mixed SAMs prepared in reaction mixtures with different 11-amino-1-undecanethiol (NH_2) and 1-Dodecanethiol ratios. The areas of peaks at 2965-2966 cm^{-1} assigned to the asymmetric stretching mode of methyl groups were used to determine the surface concentrations of CH_3 groups. (———) NH_2/CH_3=0/100, (———) NH_2/CH_3=10/90, (———) NH_2/CH_3=50/50, (———) NH_2/CH_3=65/35,(———) NH_2/CH_3=75/25, (———) NH_2/CH_3=80/20, (———) NH_2/CH_3=85/15, (———) NH_2/CH_3=90/10,(———) NH_2/CH_3=95/5, (———) NH_2/CH_3=100/0 in the reaction mixture for the surface preparation.

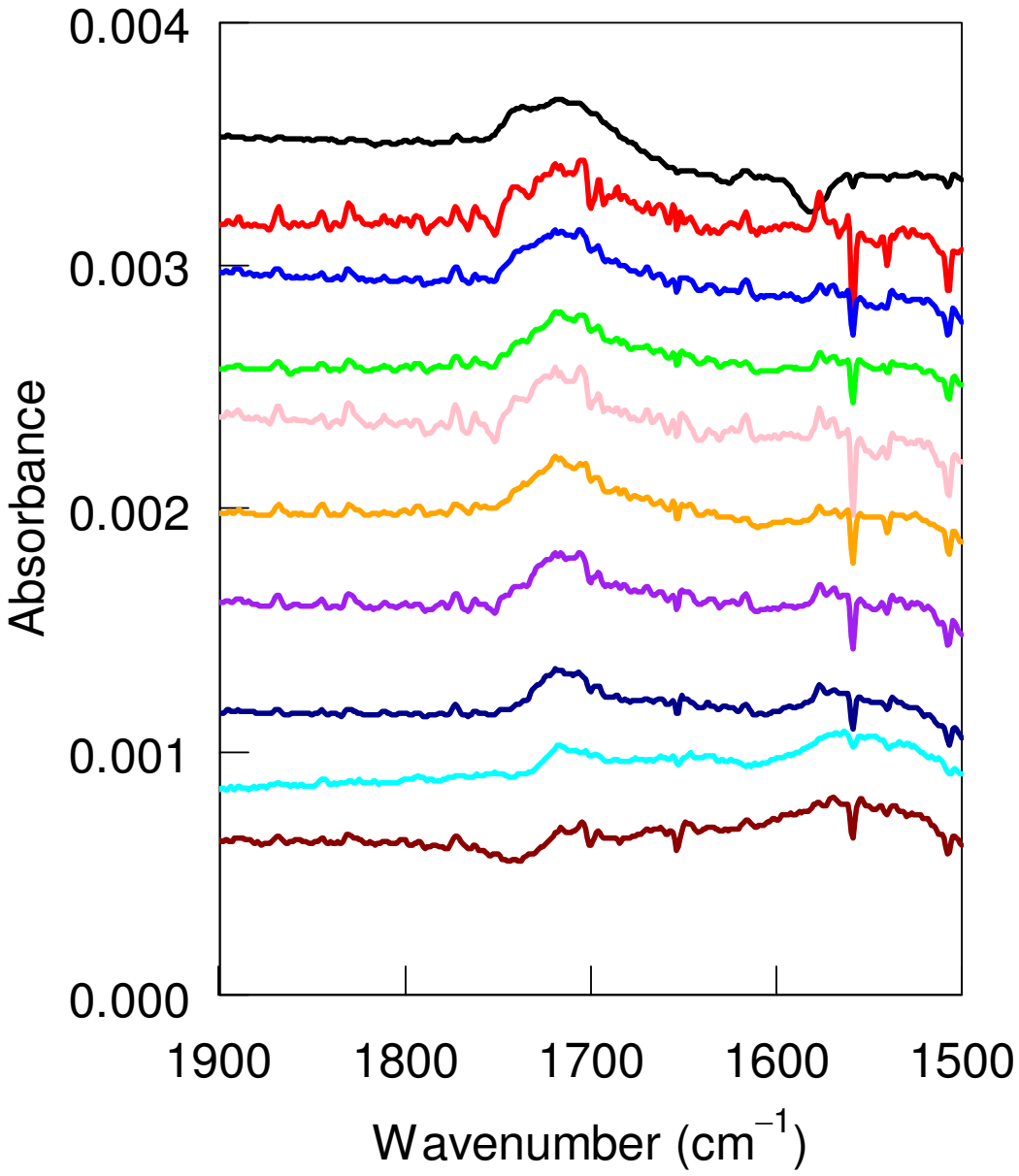

Figure. S5. FTIR spectra for mixed SAMs prepared in reaction mixtures with different 11-amino-1-undecanethiol (NH_2) and 11-mercaptoundecanoic acid ratios. The areas of peaks at 1719-1720 cm^{-1} for stretching mode of carboxyl groups were used to determine the surface concentrations of COOH groups. (———) NH_2/COOH=0/100, (———) COOH=5/95, (———) NH_2/COOH=10/90, (———) NH_2/COOH=25/75,(———) NH_2/COOH=40/60, (———) NH_2/COOH=50/50, (———) NH_2/COOH=60/40 (———) NH_2/COOH=80/20,(———) NH_2/COOH=90/10, (———) NH_2/COOH=100/0 in the reaction mixture for the surface preparation.