## SUPPLEMENTAL DATA

## Suppl. Video 1

Induction of slow L-selectin mediated rolling by DREG-55 mAb.

Jurkat cells show L-selectin mediated rolling at steady state on immobilized PSGL-1 in a parallel plate flow chamber at 1.5 dyn/cm<sup>2</sup>. 10  $\mu$ g/ml anti-L-selectin antibody DREG-55 was added to the flow buffer without interruption of the flow. Magnification 10×. Detailed analysis of the rolling velocity is shown in figures 1 and 2 and in suppl. video 2.

## Suppl. Video 2

L-selectin-mediated rolling in high temporal resolution

Untreated (top) and 10  $\mu$ g/ml DREG-55 mAb treated (bottom) Jurkat cells rolling on 6  $\mu$ g/ml immobilized PSGL-1 at 0.96 dyn/cm<sup>2</sup>. Time-lapse video with a total duration of 1000 ms recorded at 100 fps and at 40× magnification. Scale bar shows 20  $\mu$ m. Automatic cell tracking was performed as indicated in materials and methods and the velocity analysis is shown in figure 2.