**Supplementary material for the web.**

Molecular weight determination of the MuGam protein by analytical ultracentrifugation. Sedimentation equilibrium profiles were collected using interference optics at 20°C and 20000rpm, and at a loading concentration of 1mg/ml. Panel (A) shows the best fit to the experimental data; the Y axis indicates sample concentration, the X axis the rotor radius. Panel (B) shows the distribution of residuals, which is a measure of the accuracy of the data; the Y axis indicates the distribution of data points, the X axis the rotor radius.