

Supplementary Figure 1. Inhibition of allergen-induced basophil activation in four individual donors

Whole blood samples of four allergic donors were incubated in stimulation buffer containing IL-3 for one hour prior to allergen stimulation. 300nM of the fusion proteins (DE53Fc mut+, DE53Fc, DE53Fc mut- and nsD-Fc mut+) was added 1 hour or 5 minutes before the allergen challenge (as indicated). Results are expressed as percentage of CD63 positive basophils. Every graph represents one individual donor, the same data was normalized and shown in Fig.2C (n=4).

Supplementary Figure 2. Inhibition of de-novo synthesized LTC₄ in five individual donors

DE53-Fc variants inhibit formation of LTC₄ by basophils in response to allergen stimulation. Dextran gradient-enriched leukocytes were incubated for one hour or 5min in presence of the DE53-Fc variants prior to allergen stimulation. LTC₄ production was determined in the cell free supernatants after 40 minutes of culture with allergen. Results are expressed in pg per sample (corresponding to 200ul whole blood). Every graph represents one individual donor, the same data was normalized and shown in Fig.3B (n=5).

Supplementary Figure 3. Suppression of IgE-dependent IL-13 release in four individual donors

Purified human basophils of four donors were stimulated overnight with anti-FcεRI α-chain antibody in the presence of the indicated DE53-Fc variants (300nM). IL-13 was detected in the cell free supernatant after 16 h of culture. Results are expressed as a

pg/ml IL-13 in the 10-fold diluted supernatant. Every graph represents one individual donor, the same data was normalized and shown in Fig.4 (n=4).