

SUPPLEMENTARY MATERIALS

Table S1. CD34⁺-derived MCs characterization.

| Subject ID | Number of cells | Receptor expression | | Viability |
|------------|-----------------|---------------------|--------|-----------|
| | | KIT+ | FcεRI+ | |
| 1 | 540000 | 77.00% | 63.50% | 70.00% |
| 2 | 830000 | 95.70% | 59.80% | 72.30% |
| 3 | 2000000 | 64.70% | 71.80% | 84.50% |
| 4 | 500000 | 95.70% | 53.50% | 73.30% |
| 5 | 300000 | 64.30% | 69.10% | 85.00% |
| 6 | 1500000 | 91.50% | 86.10% | 80.00% |
| | 945000 | 81.48% | 67.30% | 77.52% |
| 7 | 690000 | 75.80% | 80.80% | 74.40% |
| 8 | 500000 | 70.20% | 64.20% | 80.00% |
| 9 | 5000000 | 75.20% | 47.20% | 80.00% |
| 10 | 2000000 | 84.80% | 86.90% | 80.50% |
| 11 | 500000 | 81.30% | 57.90% | 71.00% |
| | 1738000 | 77.46% | 67.40% | 77.18% |
| 12 | 2000000 | 95.80% | 75.30% | 78.00% |
| 13 | 2000000 | 64.60% | 52.90% | 83.00% |
| 14 | 1000000 | 94.80% | 67.50% | 70.00% |
| 15 | 500000 | 64.50% | 74.90% | 85.00% |
| | 1375000 | 79.93% | 67.65% | 79.00% |

Characteristics of CD34⁺-derived MCs from each group of patients (anaphylaxis, sensitized and healthy volunteers). A= Anaphylaxis; S= Sensitized; H= Healthy volunteers.

Table S2. Raw data of the mast cell activation test.

| GROUP | Subject ID | Stimuli | Pooled sera | | |
|--------------------|------------|----------------|--------------------|-------------|------------|
| | | | Healthy volunteers | Anaphylaxis | Sensitized |
| Anaphylaxis | 1 | Sera | 4.0% | 5.6% | 0.0% |
| | | Sera + Pru p 3 | 4.3% | 73.7% | 6.7% |
| | 2 | Sera | 4.5% | 5.2% | 0.0% |
| | | Sera + Pru p 3 | 5.0% | 75.3% | 22.1% |
| | 3 | Sera | 2.0% | 5.3% | 0.0% |
| | | Sera + Pru p 3 | 4.7% | 37.1% | 14.9% |
| | 4 | Sera | 6.2% | 7.6% | 0.0% |
| | | Sera + Pru p 3 | 7.6% | 66.6% | 9.7% |
| | 5 | Sera | 7.0% | 5.9% | 0.0% |
| | | Sera + Pru p 3 | 7.4% | 64.9% | 7.8% |
| | 6 | Sera | 7.8% | 7.1% | 0.0% |
| | | Sera + Pru p 3 | 10.1% | 77.7% | 32.9% |
| Sensitized | 7 | Sera | 0.0% | 4.1% | 0.1% |
| | | Sera + Pru p 3 | 3.8% | 72.9% | 23.6% |
| | 8 | Sera | 6.6% | 4.8% | 0.0% |
| | | Sera + Pru p 3 | 6.9% | 90.7% | 21.1% |
| | 9 | Sera | 0.0% | 4.8% | 0.1% |
| | | Sera + Pru p 3 | 6.1% | 81.9% | 17.6% |
| | 10 | Sera | 7.3% | 5.0% | 0.0% |
| | | Sera + Pru p 3 | 11.6% | 63.8% | 24.0% |
| | 11 | Sera | 3.1% | 4.2% | 0.0% |
| | | Sera + Pru p 3 | 5.3% | 68.1% | 8.6% |
| Healthy volunteers | 12 | Sera | 5.0% | 5.5% | 0.0% |
| | | Sera + Pru p 3 | 5.6% | 62.6% | 14.9% |
| | 13 | Sera | 4.8% | 7.4% | 0.1% |
| | | Sera + Pru p 3 | 6.8% | 64.5% | 29.1% |
| | 14 | Sera | 3.0% | 4.9% | 0.0% |
| | | Sera + Pru p 3 | 5.7% | 70.8% | 18.0% |
| | 15 | Sera | 2.0% | 5.7% | 0.0% |
| | | Sera + Pru p 3 | 4.1% | 64.1% | 18.4% |

MCs incubated overnight with different pooled sera (Anaphylaxis, Sensitized and Healthy volunteers), washed and activated with Pru p 3.