

Table SI. Comparison between single and multiple-allergen sensitization.

| Item               | Single | Multiple-allergen <sup>a</sup> |      |      |      |      |      |      |
|--------------------|--------|--------------------------------|------|------|------|------|------|------|
|                    |        | 2                              | 3    | 4    | 5    | 6    | 7    | ≥8   |
| Number of patients | 241    | 104                            | 43   | 33   | 28   | 18   | 15   | 42   |
| Positive rate      | 22.1%  | 9.5%                           | 3.9% | 3.0% | 2.6% | 1.6% | 1.4% | 3.8% |

<sup>a</sup>Patients with multiple-allergen sensitization accounted for 25.9% of the study population.

Table SII. Allergen sensitization in male and female participants.

| Allergen                | Male (N=474) | Female (N=617) | P-value | OR (95%CI)          |
|-------------------------|--------------|----------------|---------|---------------------|
| Total patients          | 253 (53.4)   | 271 (43.9)     | <0.01   | 1.462 (1.149-1.859) |
| <i>D. pteronyssinus</i> | 163 (34.4)   | 166 (26.9)     | <0.01   | 1.424 (1.098-1.847) |
| House dust              | 24 (5.1)     | 24 (3.9)       | 0.349   | 1.381 (0.739-2.351) |
| Mulberry                | 55 (11.6)    | 27 (4.4)       | <0.01   | 2.868 (1.780-4.623) |
| Cat dander              | 12 (2.5)     | 8 (1.3)        | 0.172   | 1.977 (0.802-4.877) |
| Dog hair                | 35 (7.4)     | 28 (4.5)       | 0.046   | 1.677 (1.005-2.799) |
| Cockroach               | 71 (15.0)    | 64 (10.4)      | 0.022   | 1.522 (1.061-2.185) |
| Amaranth                | 62 (13.1)    | 35 (5.7)       | <0.01   | 2.502 (1.623-3.859) |
| Mold mix                | 25 (5.3)     | 43 (7.0)       | 0.251   | 0.743 (0.447-1.235) |
| Grass mix               | 35 (7.4)     | 66 (10.7)      | 0.073   | 0.666 (0.434-1.022) |
| Tree pollen mix         | 72 (15.2)    | 48 (7.8)       | <0.01   | 2.123 (1.442-3.126) |
| Egg                     | 5 (1.1)      | 5 (0.8)        | 0.754   | 1.305 (0.376-4.534) |
| Cow's milk              | 31 (6.5)     | 22 (3.6)       | 0.032   | 1.893 (1.081-3.313) |
| Shrimp                  | 36 (7.6)     | 36 (5.8)       | 0.269   | 1.326 (0.822-2.140) |
| Beef                    | 4 (0.8)      | 6 (1.0)        | 1.000   | 0.867 (0.243-3.089) |
| Cowry                   | 5 (1.1)      | 0 (0.0)        | 0.015   | -                   |
| Crab                    | 35 (7.4)     | 34 (5.5)       | 0.212   | 1.367 (0.839-2.227) |
| Mango                   | 41 (8.7)     | 25 (4.1)       | <0.01   | 2.242 (1.343-3.743) |
| Cashew nut              | 52 (11.0)    | 38 (6.2)       | <0.01   | 1.878 (1.213-2.906) |
| Pineapple               | 13 (2.7)     | 11 (1.8)       | 0.304   | 1.554 (0.690-3.499) |

Values are expressed as n (%). OR, odds ratio.

Table SIII. Allergen sensitization in different age groups.

| Allergen                | sIgE-positive patients in age groups |                 |                  |                  |                  |                  |               | $\chi^2$ | P-value |
|-------------------------|--------------------------------------|-----------------|------------------|------------------|------------------|------------------|---------------|----------|---------|
|                         | 0-3<br>(n=54)                        | 4-12<br>(n=150) | 13-18<br>(n=103) | 19-25<br>(n=173) | 26-40<br>(n=338) | 41-60<br>(n=233) | >60<br>(n=40) |          |         |
| <i>D. pteronyssinus</i> | 3 (5.6)                              | 34 (22.7)       | 37 (35.9)        | 71 (41.0)        | 115 (34.0)       | 61 (26.2)        | 8 (20.0)      | 36.976   | <0.01   |
| House dust              | 1 (1.9)                              | 8 (5.3)         | 5 (4.9)          | 10 (5.8)         | 13 (3.9)         | 8 (3.4)          | 3 (7.5)       | 3.656    | 0.723   |
| Mulberry                | 0 (0.0)                              | 4 (2.7)         | 6 (5.8)          | 15 (8.7)         | 33 (9.8)         | 20 (8.6)         | 3 (7.5)       | 13.191   | 0.040   |
| Cat dander              | 8 (14.8)                             | 3 (2.0)         | 3 (2.9)          | 1 (0.6)          | 3 (0.9)          | 1 (0.4)          | 1 (2.5)       | 57.104   | <0.01   |
| Dog hair                | 10 (18.5)                            | 13 (8.7)        | 7 (6.8)          | 10 (5.8)         | 12 (3.6)         | 10 (4.3)         | 1 (2.5)       | 23.425   | <0.01   |
| Cockroach               | 0 (0.0)                              | 12 (8.0)        | 14 (13.6)        | 32 (18.5)        | 45 (13.3)        | 29 (12.5)        | 3 (7.5)       | 17.548   | <0.01   |
| Amaranth                | 0 (0.0)                              | 5 (3.3)         | 7 (6.8)          | 20 (11.6)        | 35 (10.4)        | 27 (11.6)        | 3 (7.5)       | 16.152   | <0.01   |
| Mold mix                | 3 (5.6)                              | 12 (8.0)        | 6 (5.8)          | 7 (4.1)          | 13 (3.9)         | 19 (8.2)         | 8 (20.0)      | 20.027   | <0.01   |
| Grass mix               | 0 (0.0)                              | 5 (3.3)         | 9 (8.7)          | 22 (12.7)        | 40 (11.8)        | 21 (9.0)         | 3 (7.5)       | 17.251   | <0.01   |
| Tree pollen mix         | 1 (1.9)                              | 9 (6.0)         | 13 (12.6)        | 21 (12.1)        | 46 (13.6)        | 25 (10.7)        | 5 (12.5)      | 11.413   | 0.076   |
| Egg                     | 4 (7.4)                              | 3 (2.0)         | 1 (1.0)          | 1 (0.6)          | 1 (0.3)          | 0 (0.0)          | 0 (0.0)       | 31.170   | <0.01   |
| Cow's milk              | 17 (31.5)                            | 11 (7.3)        | 5 (4.9)          | 12 (6.9)         | 6 (1.8)          | 1 (0.4)          | 1 (2.5)       | 103.738  | <0.01   |
| Shrimp                  | 1 (1.9)                              | 6 (4.0)         | 6 (5.8)          | 18 (10.4)        | 25 (7.4)         | 17 (7.3)         | 0 (0.0)       | 10.985   | 0.089   |
| Beef                    | 0 (0.0)                              | 3 (2.0)         | 1 (1.0)          | 1 (0.6)          | 4 (1.2)          | 1 (0.4)          | 0 (0.0)       | 3.904    | 0.690   |
| Cowry                   | 1 (1.9)                              | 1 (0.7)         | 1 (1.0)          | 0 (0.0)          | 2 (0.6)          | 0 (0.0)          | 0 (0.0)       | 5.220    | 0.516   |
| Crab                    | 1 (1.9)                              | 4 (2.7)         | 6 (5.8)          | 17 (9.8)         | 24 (7.1)         | 16 (6.9)         | 1 (2.5)       | 13.660   | 0.034   |
| Mango                   | 0 (0.0)                              | 4 (2.7)         | 6 (5.8)          | 14 (8.1)         | 25 (7.4)         | 14 (6.0)         | 3 (7.5)       | 9.005    | 0.173   |
| Cashew nut              | 1 (1.9)                              | 5 (3.3)         | 5 (4.9)          | 17 (9.8)         | 37 (11.0)        | 21 (9.0)         | 4 (10.0)      | 13.437   | 0.037   |
| Pineapple               | 1 (1.9)                              | 2 (1.3)         | 0 (0.0)          | 4 (2.3)          | 10 (3.0)         | 5 (2.2)          | 2 (5.0)       | 5.246    | 0.513   |

Values are expressed as n (%). sIgE, specific immunoglobulin E.