Supplementary Table 1

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| --- | --- | --- | --- |
|  | **Study population** | **Excluded from analysis** | **p-value** |
|  | **N(%)** | **N (%)** |  |
| **Sex** |  |  |  |
| Male | 372 (53.1) | 247 (52.4) | 0.9 |
| Female | 329 (46.9) | 224 (47.6) |  |
|  |  |  |  |
| **Ethnicity** |  |  |  |
| Chinese | 410 (58.5) | 281 (52.5) | 0.06 |
| Malay | 166 (23.7) | 157 (29.3) |  |
| Indian | 125 (17.8) | 97 (18.1) |  |
|  |  |  |  |
| **Mode of delivery** |  |  |  |
| Vaginal | 424 (63.3) | 300 (66.1) | 0.3 |
| Cesarean | 246 (36.7) | 154 (33.9) |  |
|  |  |  |  |
| **Maternal education levels** |  |  |  |
| Less than 12 years | 270 (38.8) | 235 (44.9) | 0.03 |
| At least 12 years | 426 (61.2) | 288 (55.1) |  |
|  |  |  |  |
| **Family history of allergy** | 250 (50.6) | 139 (49.5) | 0.8 |
| No family history of allergy | 244 (49.4) | 142 (50.5) |  |

Table 1 : Demographics of study population

Supplementary methods :

We used the ISAAC modified questionnaire as used in other studies. Study team members called the subjects who reported rhinitis to collect information on the number of episodes of rhinitis and the duration of each episode. A case prior to 18 months required a single episode that lasted for at least 4 weeks or two or more episodes each lasting at least 2 weeks. New cases of rhinitis after 18 months were defined by one or more episodes lasting at least 2 weeks.

For allergic outcomes (eczema, rhinitis, wheeze and use of nebulizer) by 18 months, the allergic outcome was classified as absent when the answers for the visits and/or at 18 month were “no.” For allergic outcomes (eczema, rhinitis, wheeze and use of nebulizer) by 36 months, the allergic outcome was classified as absent when the answers for the visits were “no” for the first 18 months and subsequent time points. For allergic outcomes (eczema, rhinitis, wheeze and use of nebulizer) by 60 months, the allergic outcome was classified as absent when the answers for the visits were “no” for the first 18 months and at least 75% of subsequent timepoints.

The UPLC method is as follows: in an amber micro-centrifuge tube, a 30 µL aliquot of plasma was deprotienized with equal volume of EB solution (ethanol-tert-butanol, 4:1, v/v) and I.S. (echinenone, 0.4 mg/L). It was then extracted with 100 µL of n-hexane for 2 min. After centrifugation (15 000 g/ 1 min), 160 µL of supernatant was transferred into another amber micro-centrifuge tube and dried under a stream of nitrogen. The dried residue was reconstituted in 60 µL of EB solution and 5 µL was injected onto a Kinetex C18 core-shell (2.6µm, 100 mm x 4.6 mm ID; Phenomenex). The four mobile phase solutions used for gradient separation were: A, pure acetonitrile; B, pure methanol; and C, a mixture of ethanol and tert-butanol (8:2, v/v) and D, pure water. Using a Waters Acquity H-class UPLC system, the gradient separation was initiated with 100% D at a constant flow rate of 0.6 ml/min and linearly changed to 100% B within 0.1 min, 10% A and 90% B from 0.1-6 min, 40% A and 60% C from 6-8 min and 100% C from 10-14 min. The column was then re-equilibrated with water (100% D) for 5min before the next injection of sample.