Table S1. Primers for qPCR

| Primer | Sequences (5'-3') | Gene Bank ID |
| :---: | :---: | :---: |
| IL6 F | ACTCACCTCTTCAGAACGAATTG | NM_000600.5 |
| IL6 R | CCATCTTTGGAAGGTTCAGGTTG |  |
| IL-1 $\alpha$ F | ATGGCCAAAGTTCGAGACATG | NM_000575.4 |
| IL-1 $\alpha$ R | CTACGCCTGGTTTTCCAGTATCTGA |  |
| TNF $\alpha$ F | ATGAGCACTGAAAGCATGATCC | NM_000594.4 |
| TNF $\alpha$ R | GAGGGCTGATTAGAGAGAGGTC |  |
| FLG F | GCAAGGTCAAGTCCAGGAGA | NM_00206.1 |
| FLG R | CCCTCGGTTTCCACTGTCTC |  |
| LOR F | GAGTTGGAGGTGTTTTCCAGGG | NM_000427.3 |
| LOR R | GCAGAACTAGATGCAGCCGGA |  |
| IVL F | TAACCACCCGCAGTGTCCAG | NM_005547.3 |
| IVL R | ACAGATGAGACGGGCCACCTA |  |
| GADPH F | GAAGGTCGGAGTCAACGGATT | NM_002046.7 |
| GADPH R | TGACGGTGCCATGGAATTTG |  |

Table S2. Formula Composition

| Ingredient | Content (\%) |
| :---: | :---: |
| Carbomer | $1 \%$ |
| Propylene glycol | $15 \%$ |
| Water | $100 \%$ |
| DHA | $0.1 \%$ |



Figure S1. Effect of poly I:C, LPS, and a cocktail on the TSLP secretion in NHEK cells. The changes of TSLP were accessed using ELISA. (A) Effects of poly I:C on the TSLP secretion. (B) Effects of LPS on the TSLP secretion. (C) Effects of LPS + poly I:C on the TSLP secretion. Data are expressed as mean $\pm$ standard deviation (SD). Cocktail, LPS + poly I:C; L, LPS, lipopolysaccharide; P , poly I:C, polyinosinic-polycytidylic acid; TSLP, thymic stromal lymphopoietin.

## Methods

Regarding LPS and poly I:C, we determined the optimum concentrations for subsequent studies. NHEK cells ( $6 \times 10^{3}$ cells/well) were seeded in 96 -well plates (Nunc, Thermo Fisher Scientific, Waltham, MA, USA) and treated with different concentrations of poly I:C, LPS, and poly I:C + LPS for 24 h according to the results of cells viability. We defined the best concentration of LPS plus poly I:C by measuring the expression of TSLP. The supernatant of NHEK cells were collected from the six-well plates. Thymic stromal lymphopoietin (TSLP) were determined by using ELISA kits (R\&D System Inc., Minneapolis, MN, USA). The tests were performed strictly according to the manufacturer's instructions.

## Results

Finally, we combined $20 \mu \mathrm{~g} / \mathrm{ml}$ LPS and $10 \mu \mathrm{~g} / \mathrm{ml}$ poly I:C for 24 hours and found that the expression of TSLP in the cocktail was significantly higher than another mixed group.

