Supplementary Information

Title: Interleukin 33 exacerbates antigen driven airway hyperresponsiveness, inflammation and remodeling in a mouse model of asthma

Authors: LC Sjöberg[1,*], A Zoltowska Nilsson[2,*], Y Lei[2], JA Gregory[1, 3], M Adner[1, 3, #] and GP Nilsson[2, 3, #]

Affiliations:

[1] Unit of Experimental Asthma and Allergy Research, Institute of Environmental Medicine; [2] Immunology and Allergy Unit, Department of Medicine; [3] Centre for Allergy Research, Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden

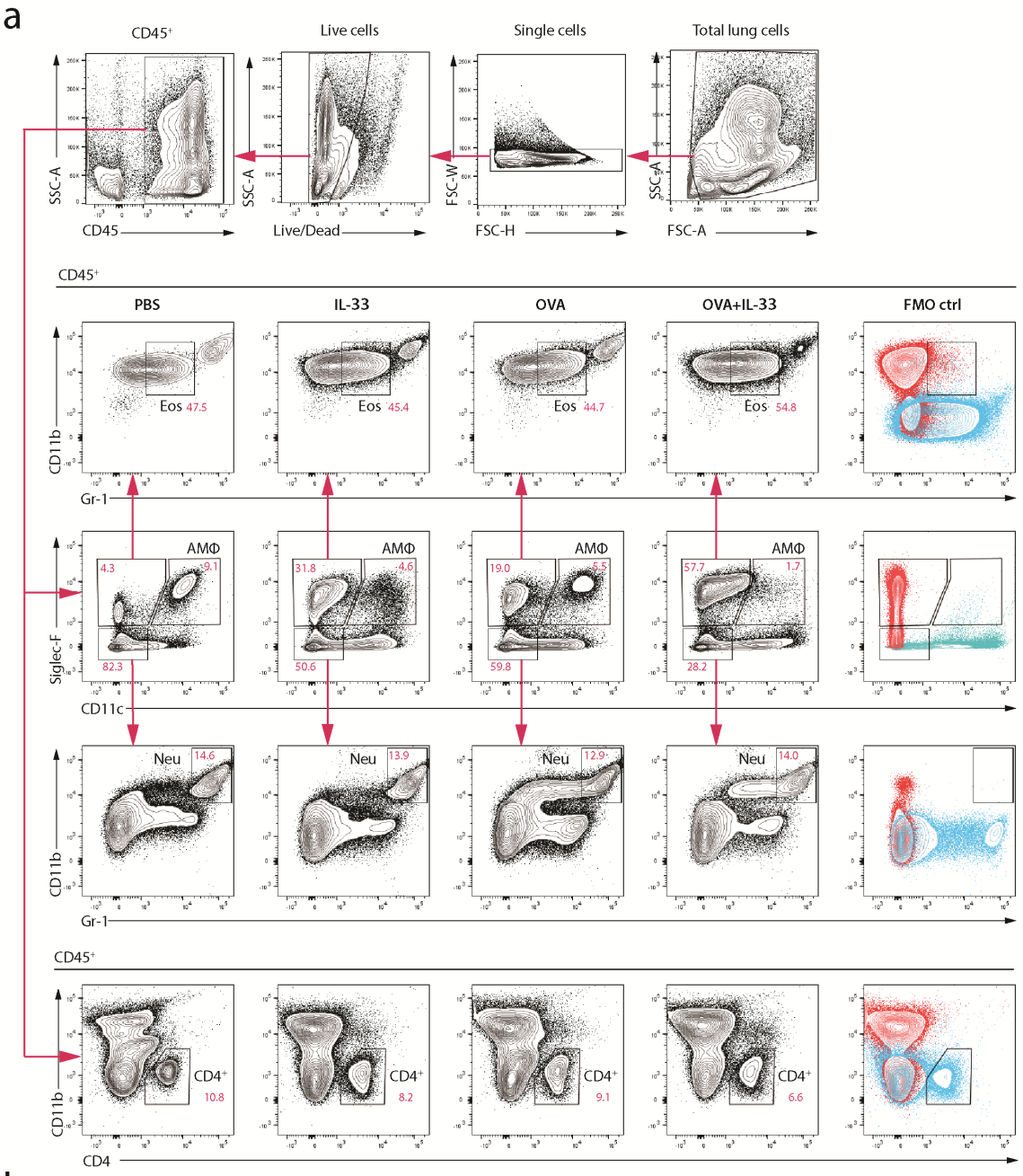
[*] These authors contributed equally to this study.

[#] These authors share senior authorship

Corresponding author:

Gunnar Nilsson, Department of Medicine, Solna, Immunology and Allergy Unit, Karolinska Institutet, KS L2:04 171 76 Stockholm

E-mail: Gunnar.P.Nilsson@ki.se; Phone: +46 8 517 702 05


a
CD45+
Live cells
Single cells
Total lung cells
SSC-A
CD45
Live/Dead
FSC-W
FSC-H
FSC-A
CD45+
PBS
IL-33
OVA
OVA+IL-33
FMO ctrl
CD11b
Gr-1
Eos 47.5
Eos 45.4
Eos 44.7
Eos 54.8
AMΦ
Siglec-F
CD11c
4.3
9.1
82.3
31.8
4.6
50.6
19.0
5.5
59.8
57.7
1.7
28.2
Neu
14.6
13.9
12.9
14.0
CD45+
CD4+
10.8
8.2
9.1
6.6
CD4
b
Lung cells (% of Total lung cells)
25
20
15
10
5
0
PBS
IL-33
OVA
OVA+IL-33
AMΦ
Eos
Neu
CD4+cells

Supplementary Figure S1. Flow cytometric analysis of inflammatory lung cells. (a) Gating strategy and representative plots for each exposure group. Alveolar macrophages were identified as $CD45^+$ $SiglecF^+$ $CD11c^+$, eosinophils as $CD45^+SiglecF^+CD11c^-CD11b^+Gr\text{-}1^{lo}$, neutrophils as $CD45^+$ $SiglecF^-$ $CD11c^-Gr\text{-}1^{hi}CD11b^{hi}$ and $CD4^+$ cells as $CD45^+CD11b^-$ $CD4^+$. Gates were set based on FMO controls, FMO ctrl= overlay of the two FMO controls for each respective plot. The representative FMO plots and plots showing the representative $SSC^{low}FSC^{low}CD45^+$ gating belong to the OVA+IL-33 group. (b) Lung frequencies of alveolar macrophages, eosinophils, neutrophils and $CD4^+$ cells. *p<0.05, **p<0.01, ***p<0.001 (ANOVA, Bonferroni). Results are pooled data of four independent experiments (mean ±SEM of n=8 mice in each group).