

**Short-term intratracheal use of PEG-modified IL-2 and glucocorticoid persistently alleviates asthma in a mouse model**

Kefei Wu<sup>1\*</sup>, Jiexian Ma<sup>1\*</sup>, Weiya Bai<sup>2</sup>, Xiaoxian Cui<sup>2</sup>, Tao Han<sup>1</sup>, Shiyuan Wang<sup>3</sup>,  
Youhua Xie<sup>2</sup>, Yanhui Xie<sup>1</sup>

*<sup>1</sup>Department of Hematology, Huadong Hospital, Fudan University, Shanghai 200040, People's Republic of China, <sup>2</sup>Key laboratory of medical molecular virology, Institutes of biomedical sciences and institute of medical microbiology, Fudan University, Shanghai 200032, People's Republic of China, <sup>3</sup>Xiamen Amoytop Biotech Co., Ltd, Xiamen 360000, People's Republic of China*

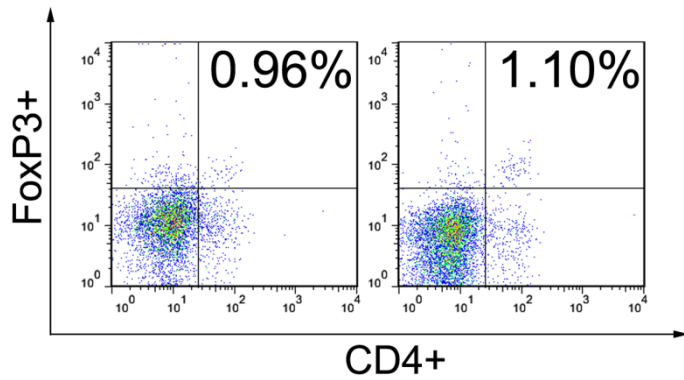
Correspondence: Yanhui Xie

E-mail: [xyh@medmail.com.cn](mailto:xyh@medmail.com.cn)

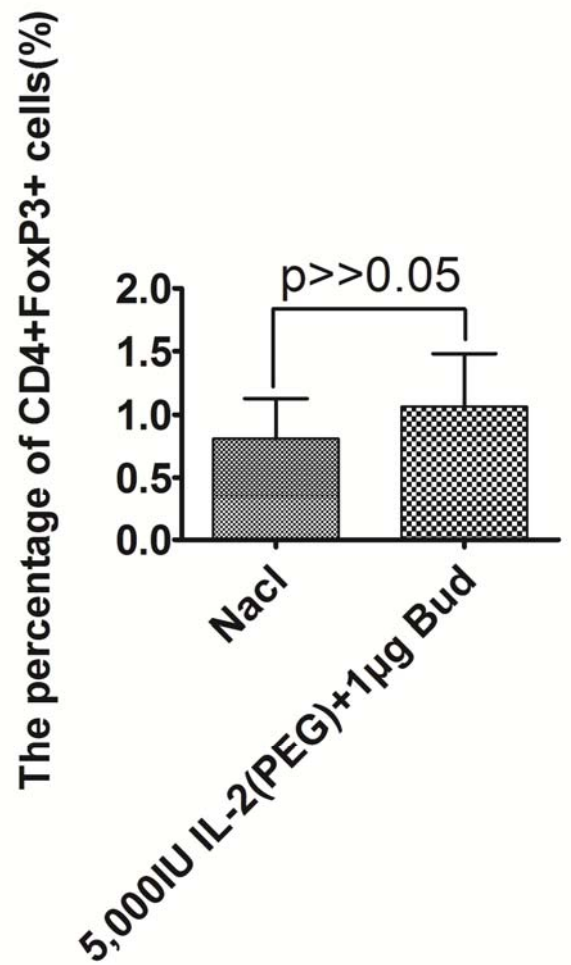
Tel: +86 13321957387

Address: No.221 West Yan'an Road, Shanghai, China

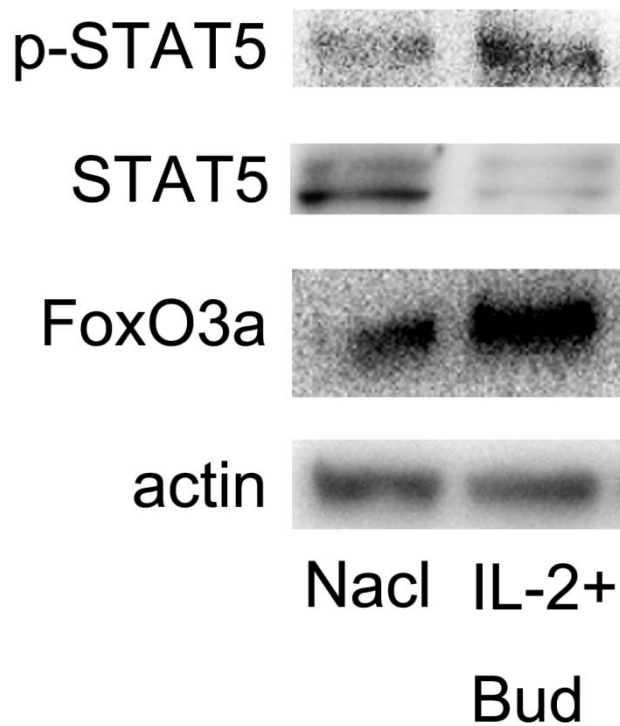
\* These authors contribute equally to this work.



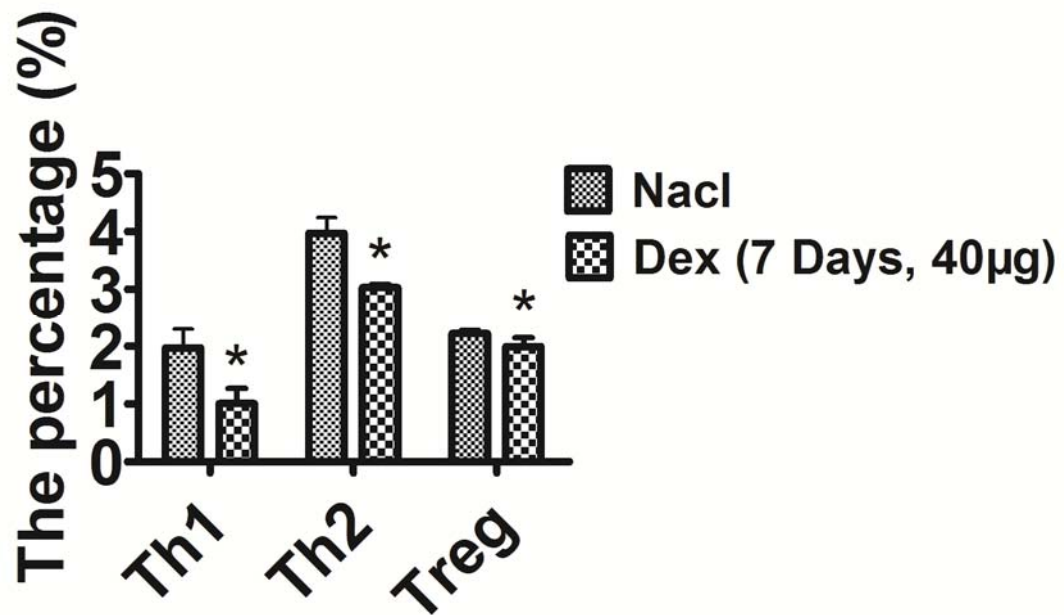
IL-2(PEG) (IU)	0	5,000
Bud ( $\mu\text{g}$ )	0	1



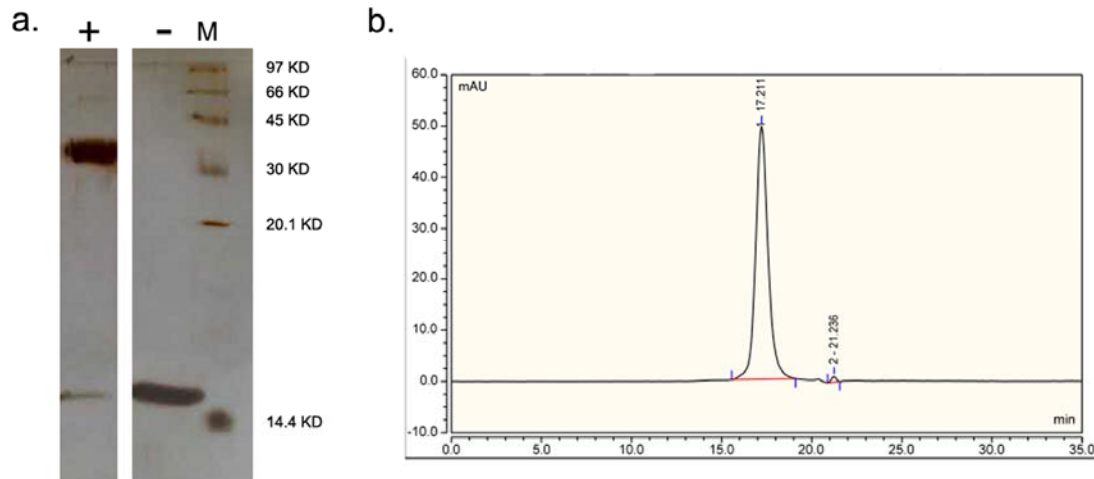
**Supplementary Fig. S1. Detection of Treg cells in BALF 6 weeks after intratracheal use of IL-2(PEG) plus budesonide.** Upregulation of Treg cells failed to be detected after 6 weeks. Data are presented as means  $\pm$  SEM (n=5 per group and data point).



**Supplementary Fig. S2. Expressions of p-Stat5, Stat5 and FoxO3a in the cells collected from BALF in the presence of the indicated treatment.** Higher expression of FoxO3a and more phosphorylation of Stat5 could be detected. Phospho-Stat5, Stat5 and FoxO3a were analyzed by immunoblotting. Similar results were obtained in 2 independent experiments.



**Supplementary Fig. S3. Detection of Th1, Th2 and Treg cells in spleen after intraperitoneal use of 40µg dexamethasone for 7 days.** Down-regulation of Th1, Th2 and Treg cells could be detected. Data are presented as means  $\pm$  SEM (n=5 per group and data point).



**Supplementary Fig. S4. Production of PEG-modified IL-2.** (a) Recombinant human IL-2 modified before (-) or after (+) modification with PEG monitored by SDS-PAGE followed with silver staining. (b) PEG-modified IL-2 after purification monitored by HP-SEC. M, marker.