

Cell Reports, Volume 31

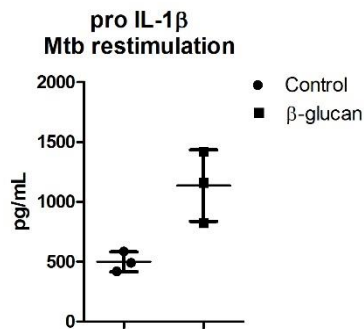
## Supplemental Information

**$\beta$ -Glucan Induces Protective Trained Immunity**

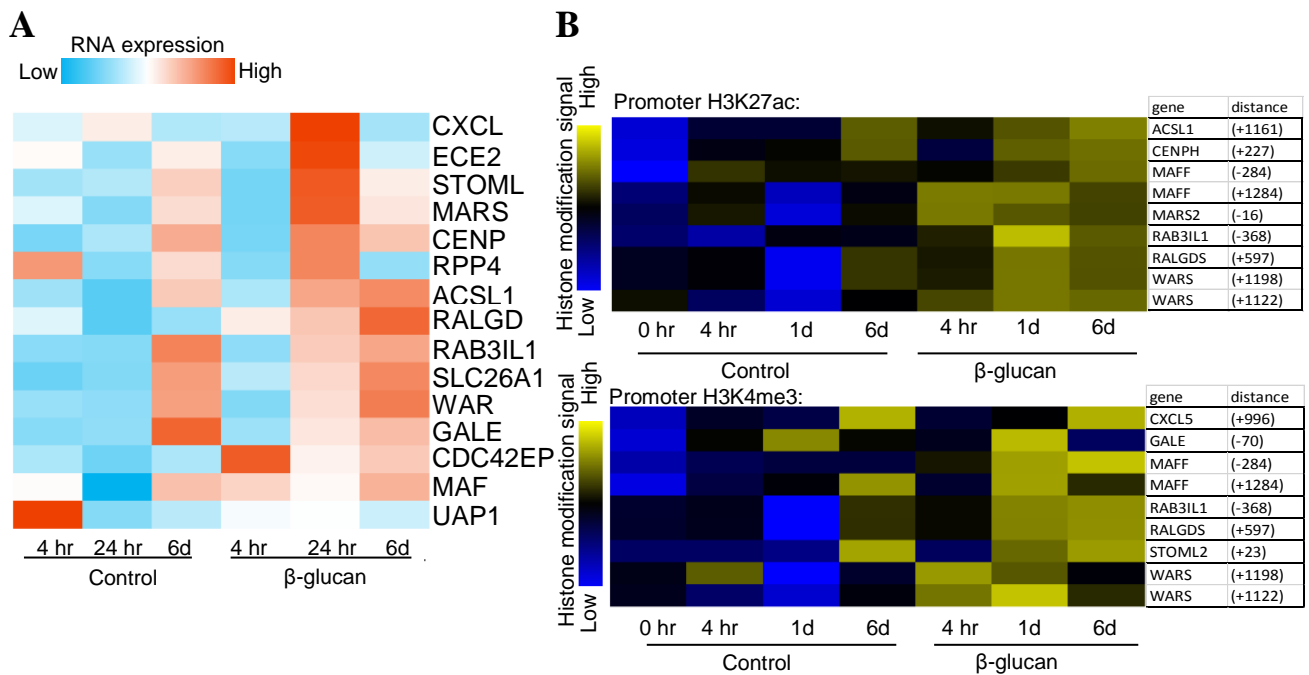
**against *Mycobacterium tuberculosis* Infection:**

**A Key Role for IL-1**

**Simone J.C.F.M. Moorlag, Nargis Khan, Boris Novakovic, Eva Kaufmann, Trees Jansen, Reinout van Crevel, Maziar Divangahi, and Mihai G. Netea**



**Figure S1, related to Figure 1B -  $\beta$ -glucan training enhances the production of intracellular pro-IL-1 $\beta$  upon Mtb restimulation.** Human monocytes were trained with  $\beta$ -glucan for 24 hr and restimulated with heat-killed *M. tuberculosis* at day 6. After 24 hr, cells were lysed and levels of pro-IL-1 $\beta$  were assessed.



**Figure S2, related to Figure 2 -  $\beta$ -glucan alters the transcriptomic profile of genes involved in anti-mycobacterial host defense via epigenetic modifications.** (A) Expression of genes involved in Mtb immunity (based on Kumar *et al.*) which are induced by exposure to  $\beta$ -glucan. Monocytes were incubated for 24 hr with either culture medium or  $\beta$ -glucan. mRNA expression was assessed 4 hr, 24 hr and 6 days after incubation. (B) Heatmap of the changes in H3K27ac and H3K4me3 in  $\beta$ -glucan-trained monocytes and control at genes known to play a role in immunity to Mtb infection (based on Kumar *et al.*).

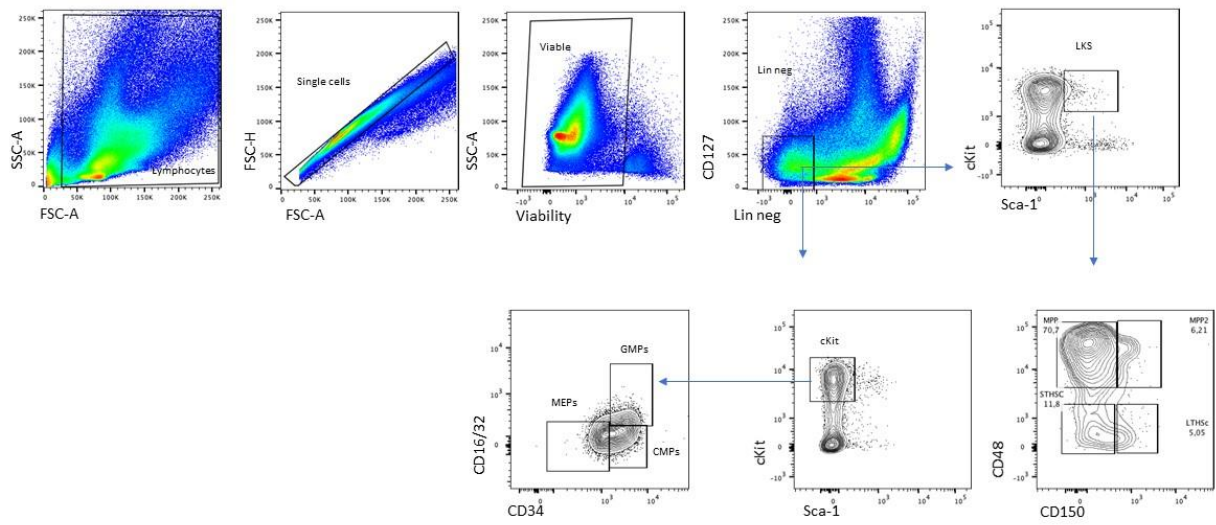


Figure S3, related to Figure 4 – Gating strategy LKS and progenitor cells.

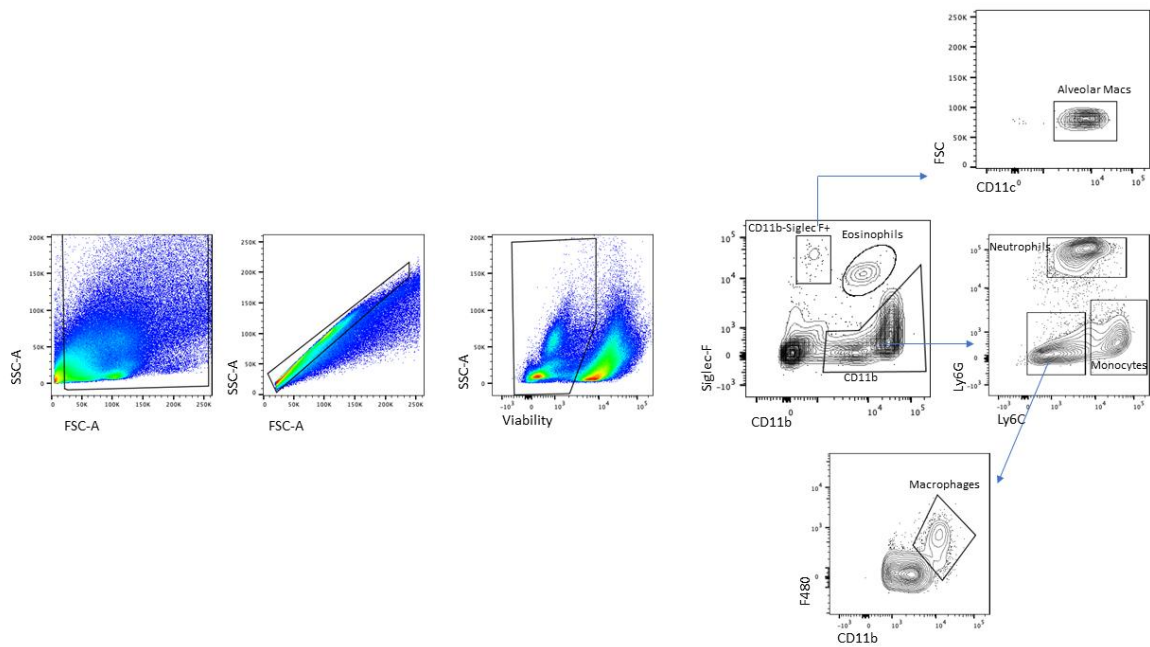
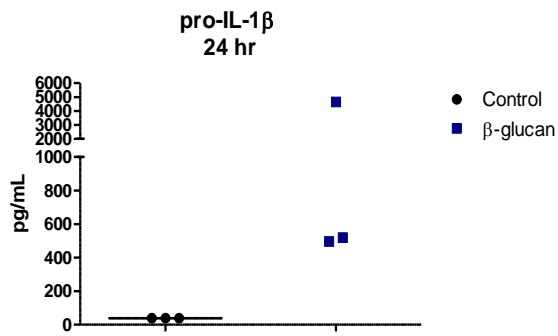
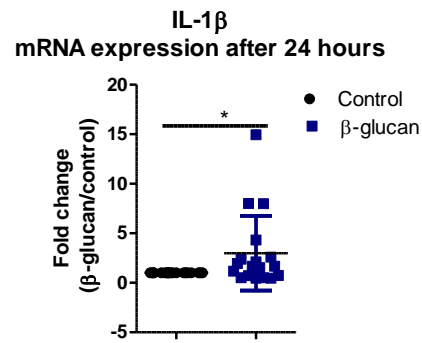


Figure S4, related to Figure 6 – Gating strategy innate immune cells.

**A****B**

**Figure S5, related to Figure 7B -  $\beta$ -glucan exposure enhances the production of intracellular pro-IL-1 $\beta$ .** (A) Human monocytes were exposed to  $\beta$ -glucan. After 24 hr, cells were lysed and levels of pro-IL-1 $\beta$  were assessed. (B) mRNA expression of IL-1 $\beta$  was determined after 24 hr stimulation with culture medium or  $\beta$ -glucan (mean  $\pm$  SD, n=18, \*p<0.05, Wilcoxon signed-rank test).

**Table S2, related to Figure 7 – Used primers.**

Gene	Forward (5'-->3')	Reverse (5'-->3')
GAPDH	CCCCGGTTTCTATAAATTGAGC	AAGAAGATGCGGCTGACTGT
ZNF UTR	AAGCACTTTGACAACCGTGA	GGAGGAATTTTGTGGAGCAA
IL1B	AATCCAGAGCAGCCTGTTG	AACAGCGAGGGAGAACTGG
IL1B (mRNA)	GATCGTACAGGTGCATCGTGC	GACAAGCTGAGGAAGATGCTGG