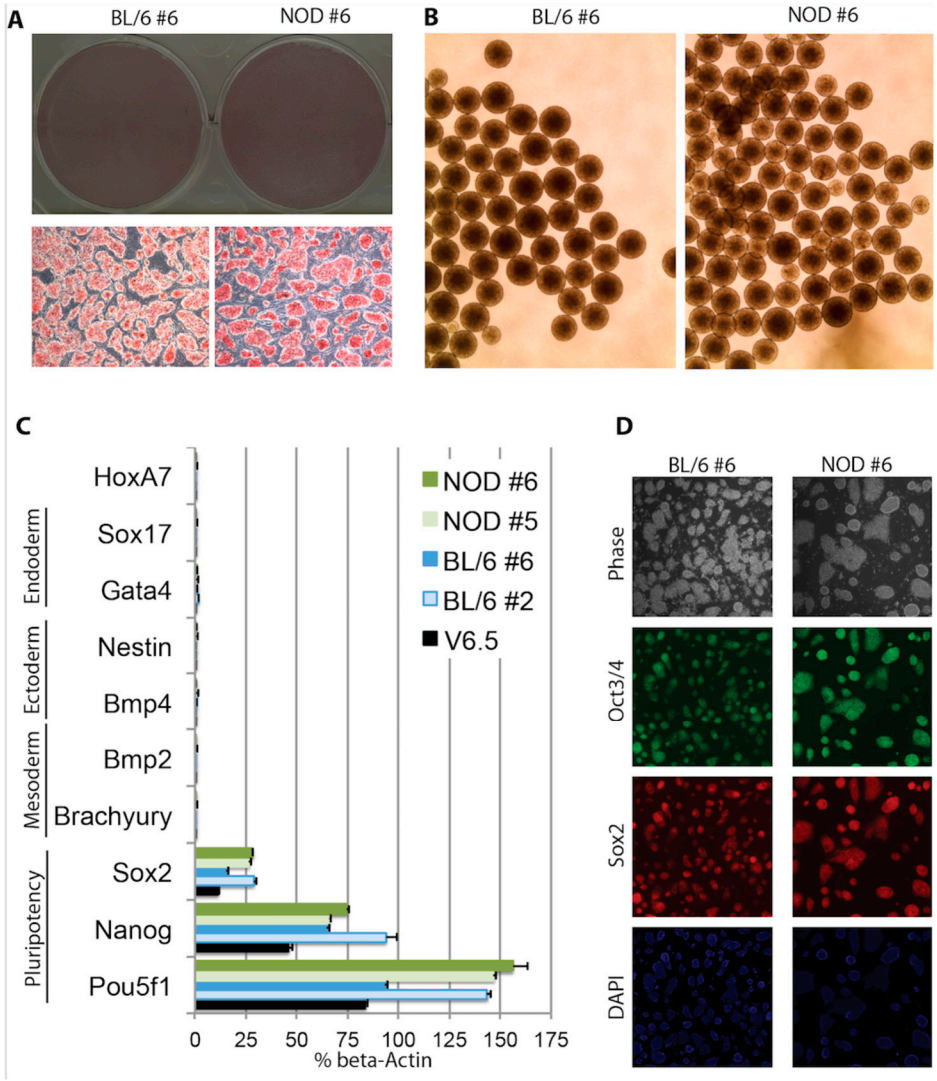
Supplementary Data



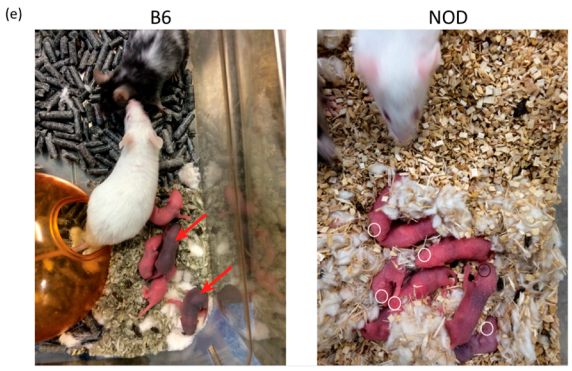


Figure S1 (a) Alkaline phosphatase expression in NOD and B6 ES cells. **(b)** NOD and B6 ES cells can form embryoid bodies with similar efficiency. **(c)** Quantitative real time PCR showed that all ES cells have high expression of pluripotent genes and lack genes that express in the three germ layers indicating differentiation. **(d)** Immunofluorescence shows similar protein expression level of pluripotent genes in B6 and NOD ES cells. **(e)** B6 ES cells were injected into albino blastocyst. Resulting chimeric mice were crossed with albino mice. Non-albino offspring (arrow) indicated transmission of B6 ES cells. B NOD ES cells were injected in non-albino blastocysts. Resulting chimeric

mice were bred with albino mice. Albino offspring (white circles) indicated germline transmission of NOD ES cells.

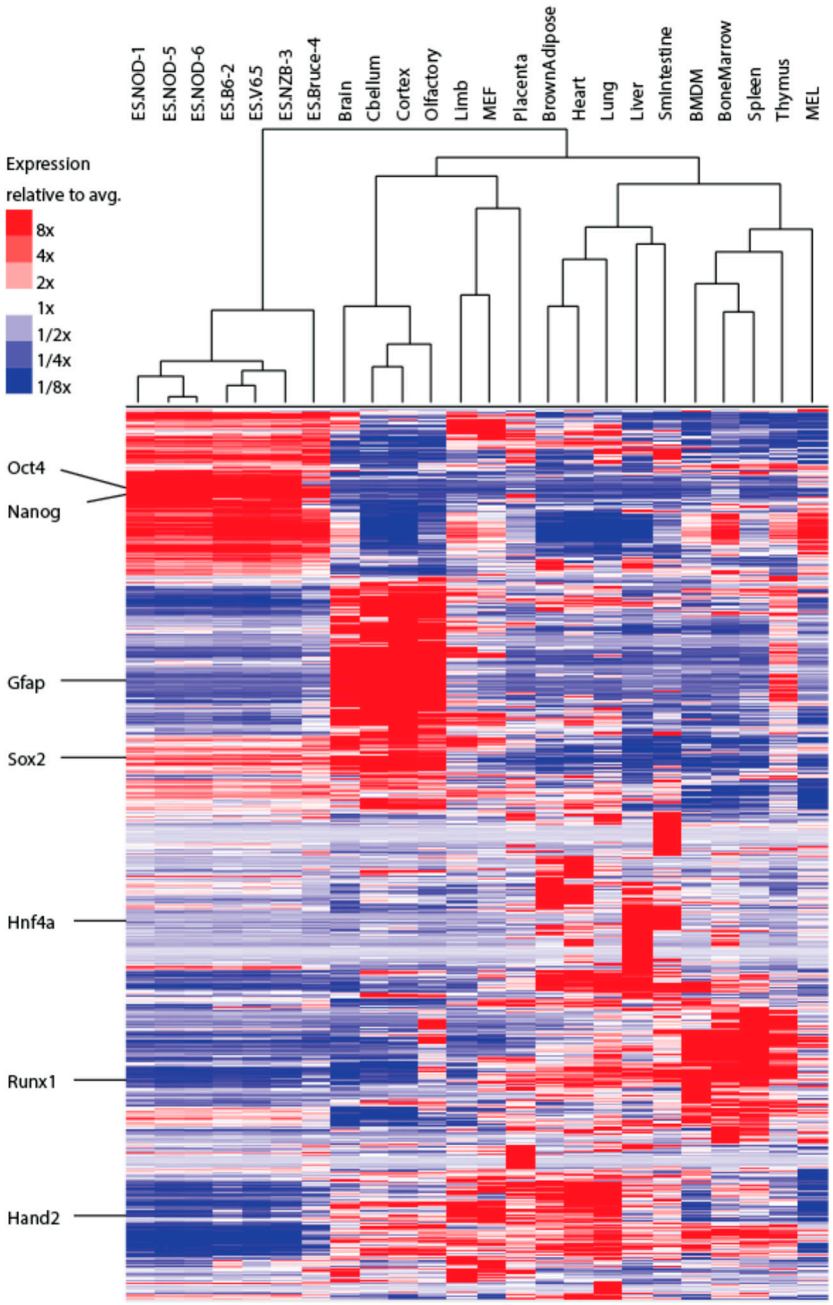
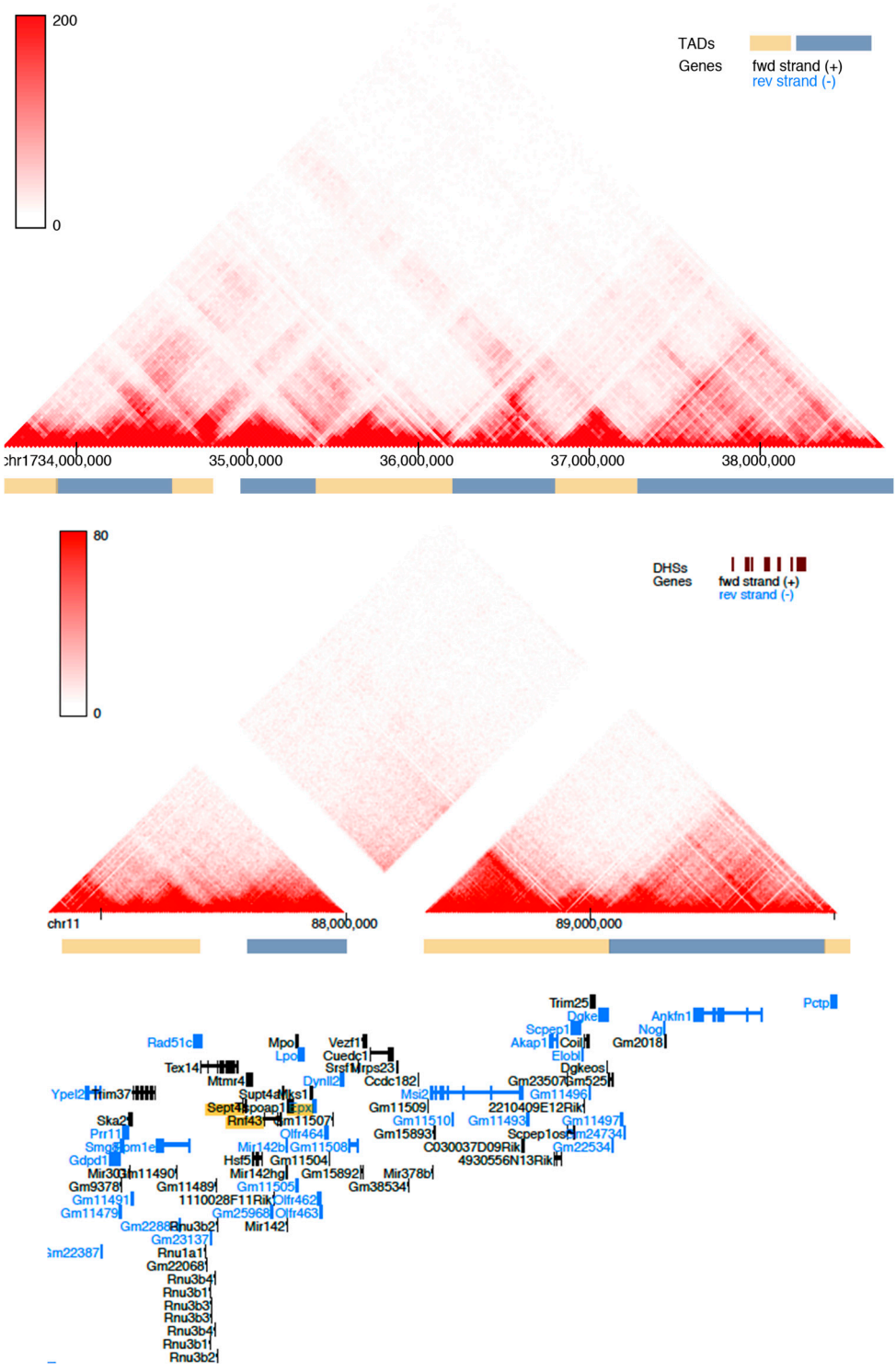


Figure S2 Heatmap of all RNA-Seq data from NOD, B6, NZB and V6.5 ES cells compared to RNA-Seq data from various mouse cells and tissues obtained from ENCODE consortium.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0
TADs
Genes
fwd strand (+)
rev strand (-)
chr17
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35,000,000
36,000,000
37,000,000
38,000,000
80
0
DHSs
Genes
fwd strand (+)
rev strand (-)
chr11
88,000,000
89,000,000
Trim25
Dgke
Ankfn1
Pctp
Scpep1
Nog
Akap1
Coil
Gm2018
Elobl
Rad51c
Mpo
Vezf1
Lpo
Cuedc1
Tex14
Srsf1
Mrps23
Dgkeos
Mtmr4
Dynll2
Ccdc182
Gm23507
Gm525
Ypel2
Ttim37
Supt4a
Iks1
Msi2
Gm11496
Sept4
Spoap1
Epx
Gm11509
2210409E12Rik
Ska2
Rnf43
Gm11507
Gm11510
Gm11493
Gm11497
Prr11
Olfr464
Gm15893
Scpep1os
Gm24734
Smg8
Dm1e
Mir142b
Gm11508
C030037D09Rik
Gm22534
Gdpd1
Hsf5
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Mir303
Gm11490
Mir142hg
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Olfr462
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Gm22387
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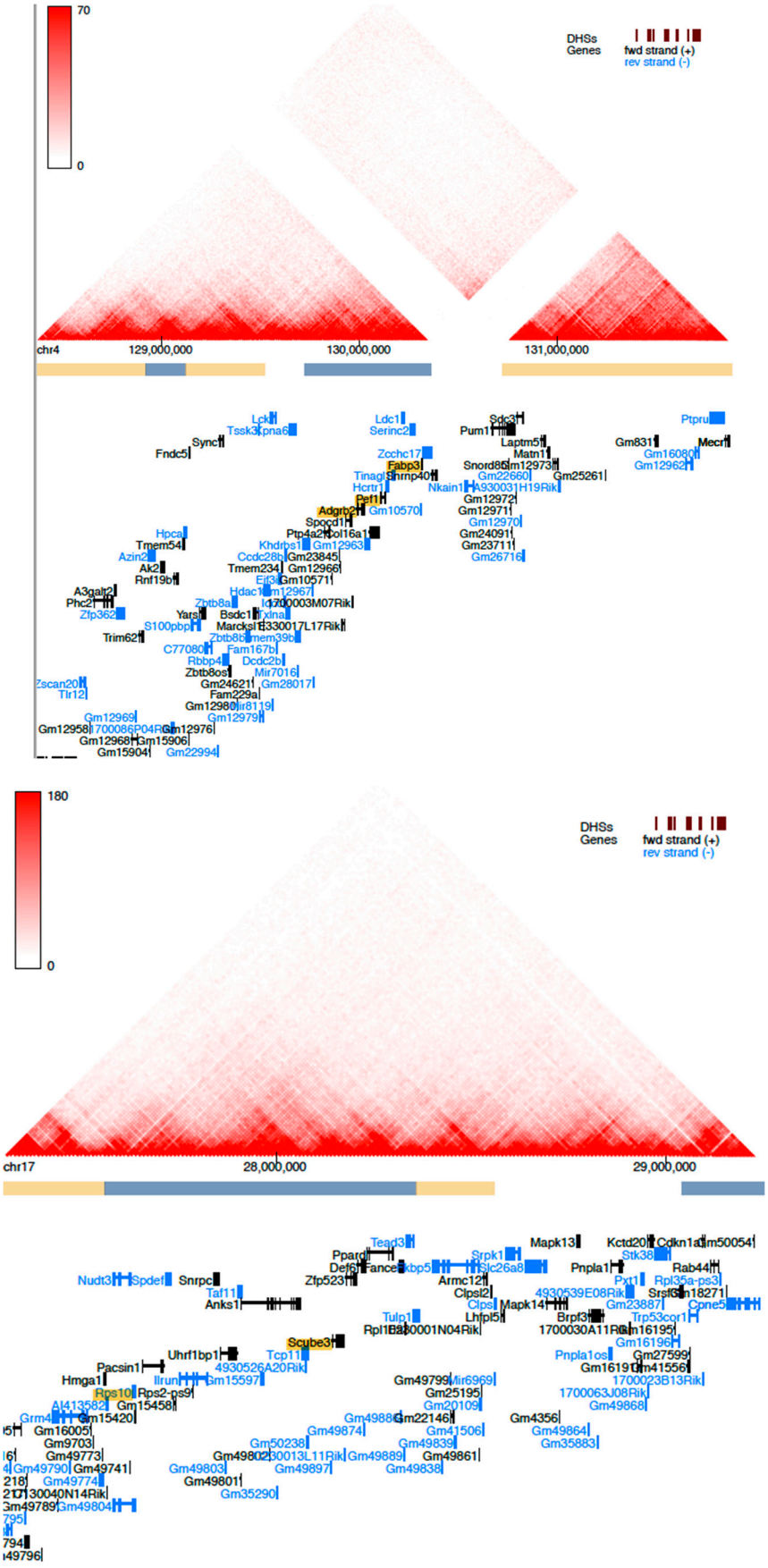

Figure S3 Hi-C data in mouse ES cells showed TADs identified in (**a**)Idd1, (**b**)Idd4.2Q, (**c**)Idd9.1 and (**d**)Idd16.1 regions.

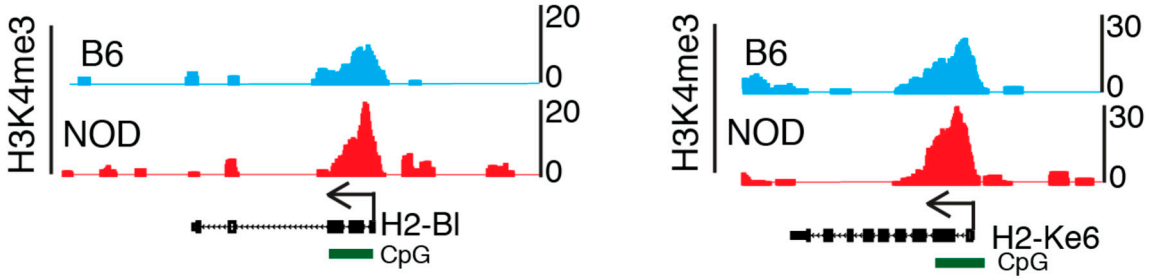

Figure S4 UCSC genome browser tracks show comparable H3K4me3 ChIP-Seq signals in up-regulated genes with CpG island at their promoters in NOD compared to B6 ES cells.

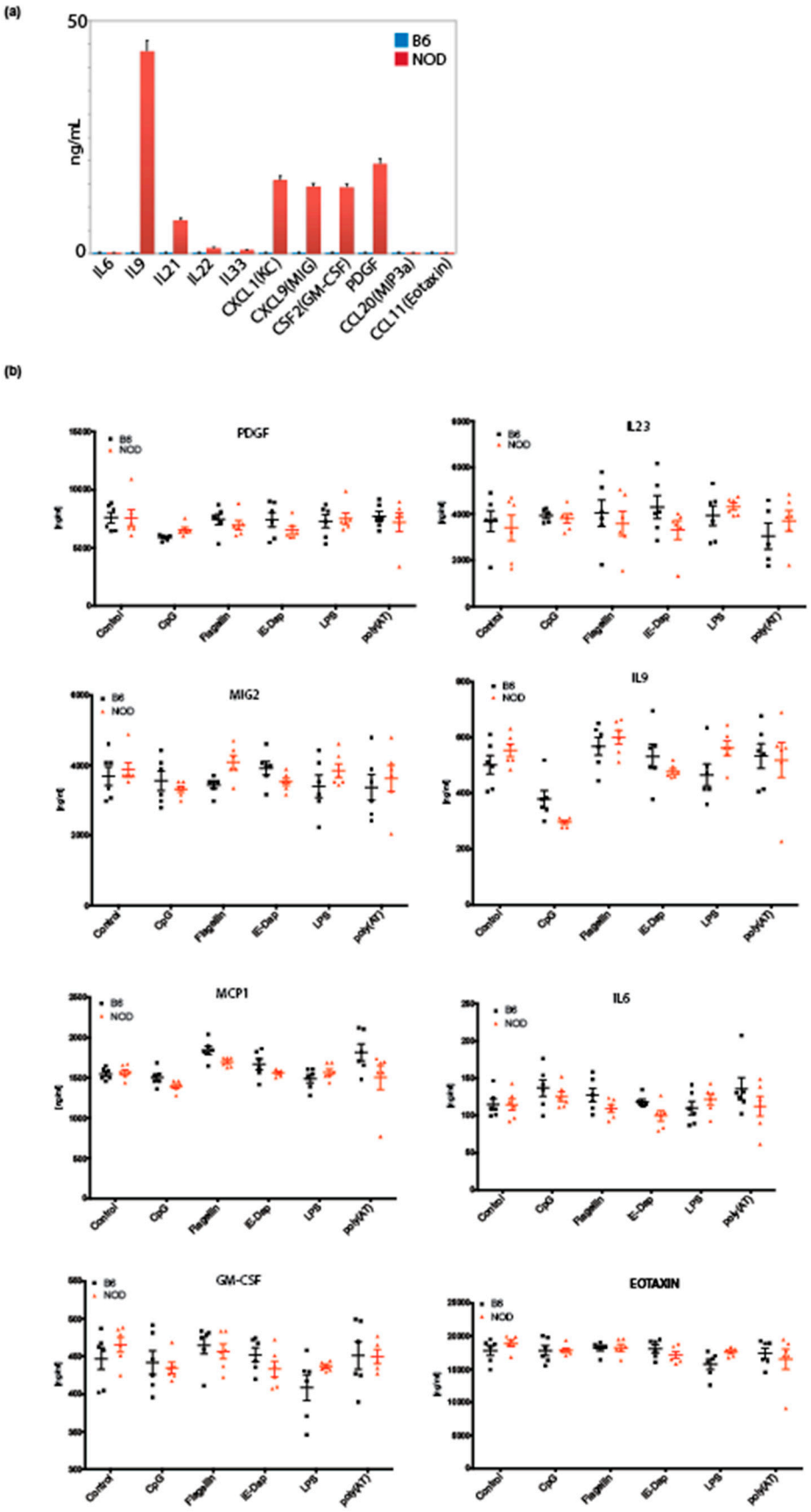

Figure S5 Multiplex ELISA measurements of cytokines and chemokines which were secreted by B6 or NOD ES cells (a) at steady state, or (b) in the presence of various triggers, but show no significance difference upon stimulation by various triggers.