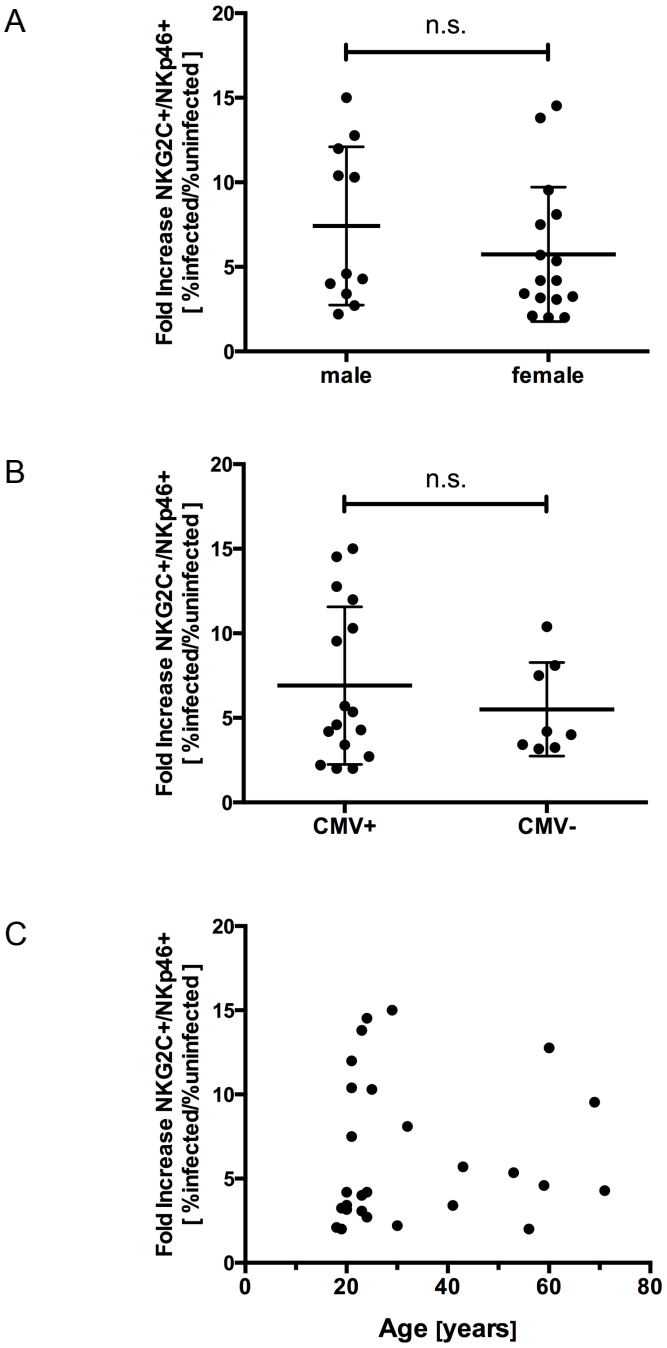
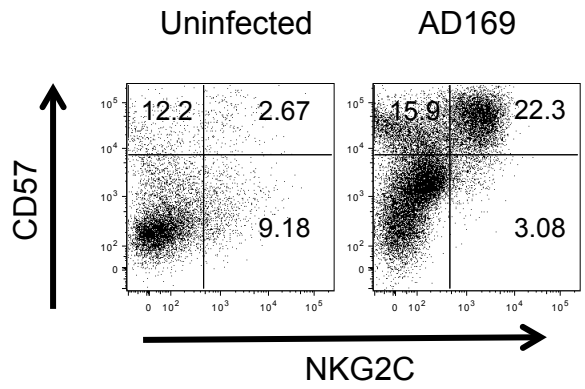
Supplementary Figure 1



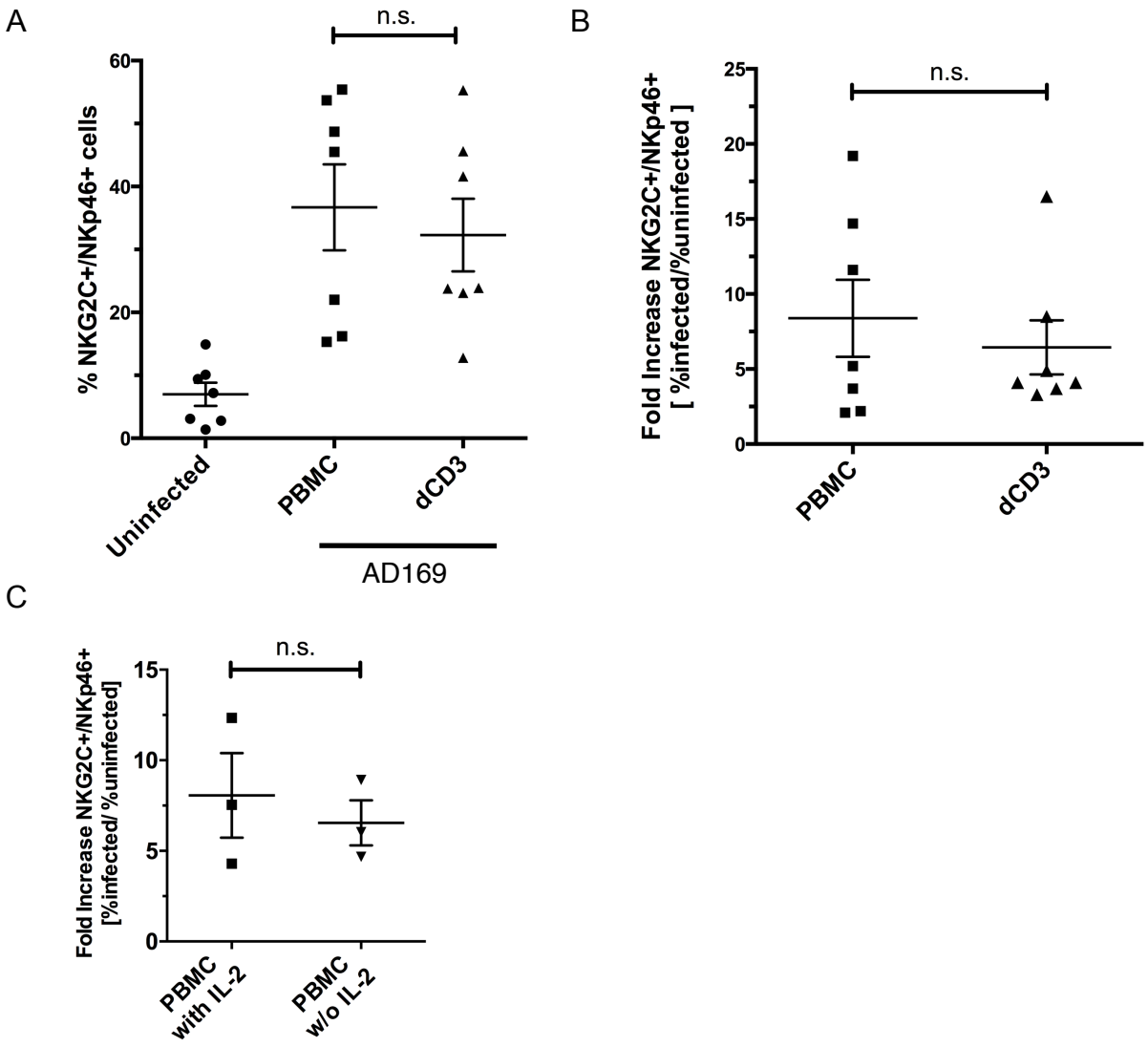
Supplementary Figure 1 PBMCs were cultured with uninfected or AD169-infected MRC-5 fibroblasts. At the end of the co-culture, cells were stained for NKp46, NKG2C, and CD3 and analyzed by flow cytometry. Depicted is the fold increase of %NKG2C+NKp46+CD3- cells in infected vs. uninfected co-cultures in relation to (A) gender, (B) CMV serostatus or (C) age. Wilcoxon matched pairs signed rank test (A,B,C); n=24; error bars = +/- SEM .

Supplementary Figure 2



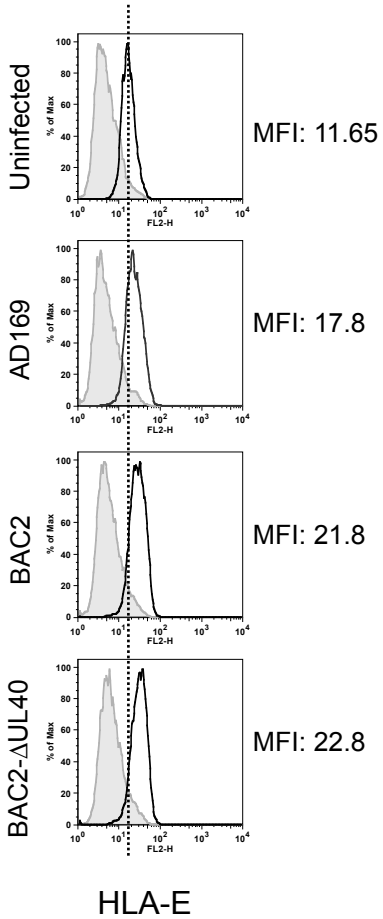
Supplementary Figure 2 MRC-5 fibroblasts were infected with HCMV strain AD169 at a multiplicity of infection (MOI) of 10 or left untreated. PBMCs were added 6-8 hours post infection (p.i.) to uninfected or infected fibroblasts and co-cultured for 10 days with IL-2 at 20 U/ml. PBMCs cultured with uninfected or with infected MRC-5 fibroblasts were stained for NKp46, NKG2C, CD57 and CD3 and analysed by flow cytometry. Dot plots are gated on live, NKp46+CD3- cells. CD57 expression on NK cells at day 10 p.i was determined in 16 co-cultures. CD57 and NKG2C expression are depicted for the co-culture shown in Fig. 1D. Numbers indicate percentage of all live NKp46+CD3- cells.

Supplementary Figure 3



Supplementary Figure 3 PBMCs or PBMCs depleted of CD3+ cells were co-cultured with uninfected or AD169 infected fibroblasts (A,B). At the end of the co-culture, cells were stained for NKp46 and NKG2C and analyzed by flow cytometry. Summary of 7 co-cultures of PBMC or PBMC with CD3 depletion (dCD3). (A) Percentage of NKG2C+ cells among all live NKp46+CD3- cells. (B) Fold increase of percentage of NKG2C+ among NKp46+ cells in infected vs. uninfected co-cultures. Wilcoxon matched pairs signed rank test; error bars = +/- SEM.(C) PBMCs were co-cultured with uninfected or infected fibroblasts in the presence or absence of 20 U/ml IL-2. At the end of the co-culture, cells were stained for NKp46 and NKG2C and analyzed by flow cytometry. Depicted is the fold increase of %NKG2C+NKp46+CD3- cells in infected vs. uninfected co-cultures. Wilcoxon matched pairs signed rank test; n=3; error bars = +/- SEM.

Supplementary Figure 4



Supplementary Figure 4 MRC-5 fibroblasts were left uninfected or infected with HCMV viral strains AD169, BAC2 or BAC2-ΔUL40 at MOI 10 and then stained with anti-HLA-E mAb (black line) or isotype control (shaded) at 22h p.i. One representative staining out of 4 is shown.

The mutant DUL40 was generated according to a previously published procedure (1) using pAD169-BAC2 (2) as parental BAC. For construction of the deletion mutant a PCR fragment was generated using the primers KL-DeltaUL40 Kana1 (TTCTTTATTCTTAGTGTGATGATAGGTAAGGGCACTCGTGAGGATGTG CAATTATCATTACCAGTGAATTCGAGCTCGGTAC) and KL-DeltaUL40-Kana2 (TTTTAATGGCCAACAG CCTGTGGCACCGCCTCCGAACGCTCGTGA GCAACAGTCGGCAGAGACCATGATTACGCCAAGCTCC) and the plasmid pSLFRTKn (3) as template DNA.

The PCR fragment containing a kanamycin resistance gene was inserted into the parental BAC by homologous recombination in *E. coli*, leading to deletion of *UL40*. The HCMV mutant was reconstituted from BAC DNA by Superfect (Qiagen) transfection in permissive MRC-5 fibroblasts.

1. Wagner M, Gutermann A, Podlech J, Reddehase MJ, Koszinowski UH. Major histocompatibility complex class I allele-specific cooperative and competitive interactions between immune evasion proteins of cytomegalovirus. *J Exp Med*. 2002;196(6):805-16.

2. Le VT, Trilling M, Hengel H. The cytomegaloviral protein pUL138 acts as potentiator of tumor necrosis factor (TNF) receptor 1 surface density to enhance ULb'-encoded modulation of TNF-α signaling. *J Virol*. 2011;85(24):13260-70.

3. Atalay R, Zimmermann A, Wagner M, Borst E, Benz C, Messerle M, Hengel H. Identification and expression of human cytomegalovirus transcription units coding for two distinct Fcgamma receptor homologs. *J Virol.* 2002;76(17):8596-608.

Supplementary Table 1

Statistics of all Co-Cultures (n=71) [%NKG2C+/NKp46+]			
	Start of culture	**End of Co-Culture Uninfected**	**End of Co-Culture AD169**
Mean	14.1 (SEM: 1.7)	12.93 (SEM: 1.2)	24.8 (SEM: 1.9)
Min.	1.2	0.8	2.4
25% Percentile	5.0	4.6	12.6
Median	9.8	10.0	19.0
75% Percentile	16.4	16.2	35.7
Max.	73	43	60