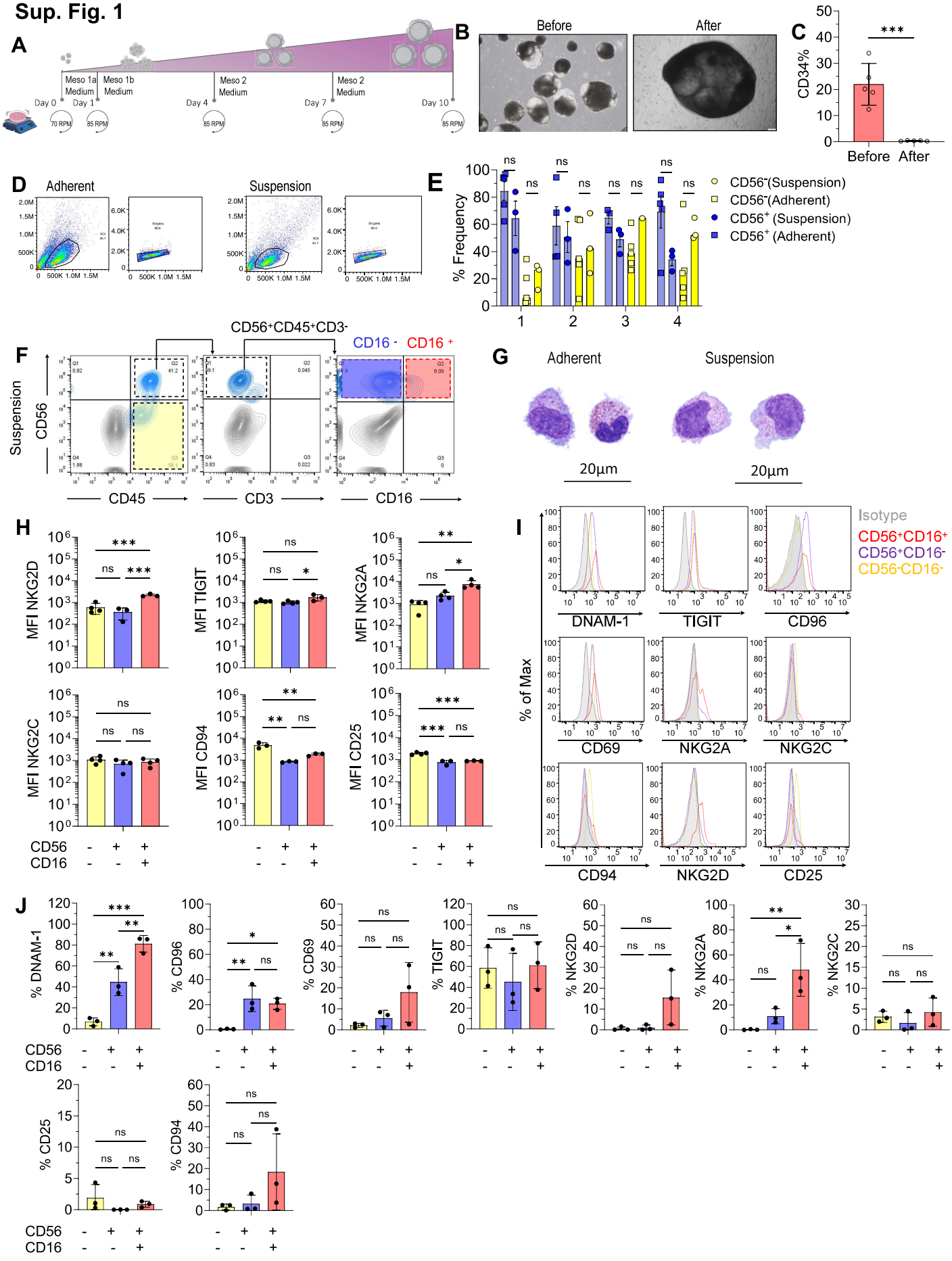
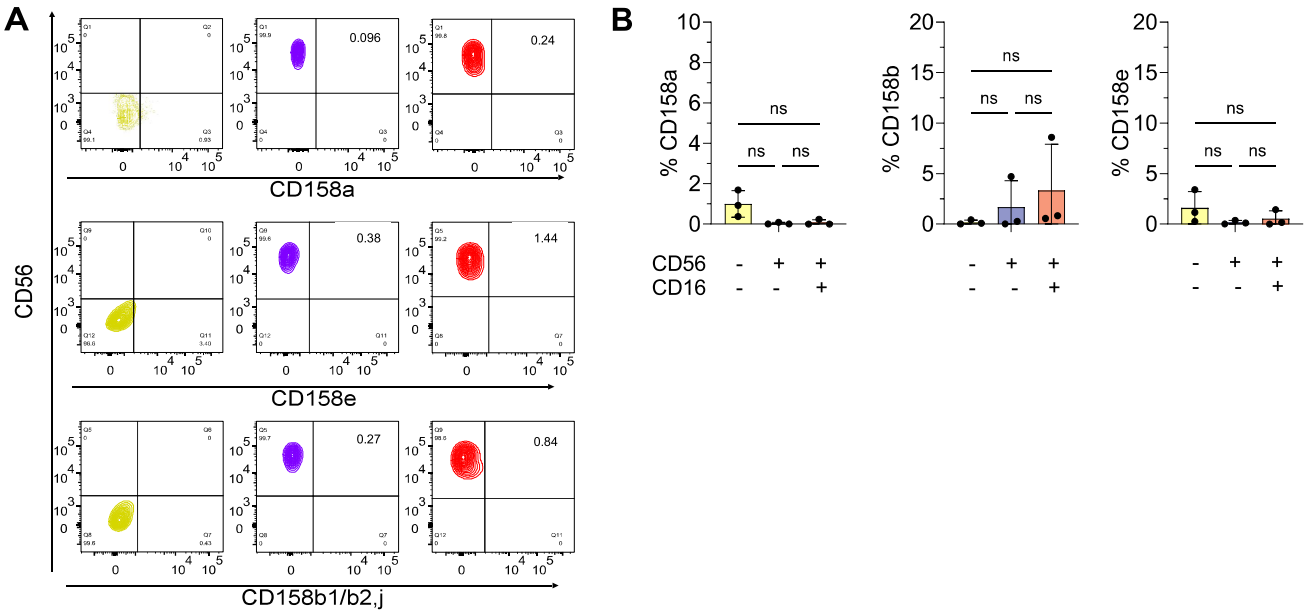
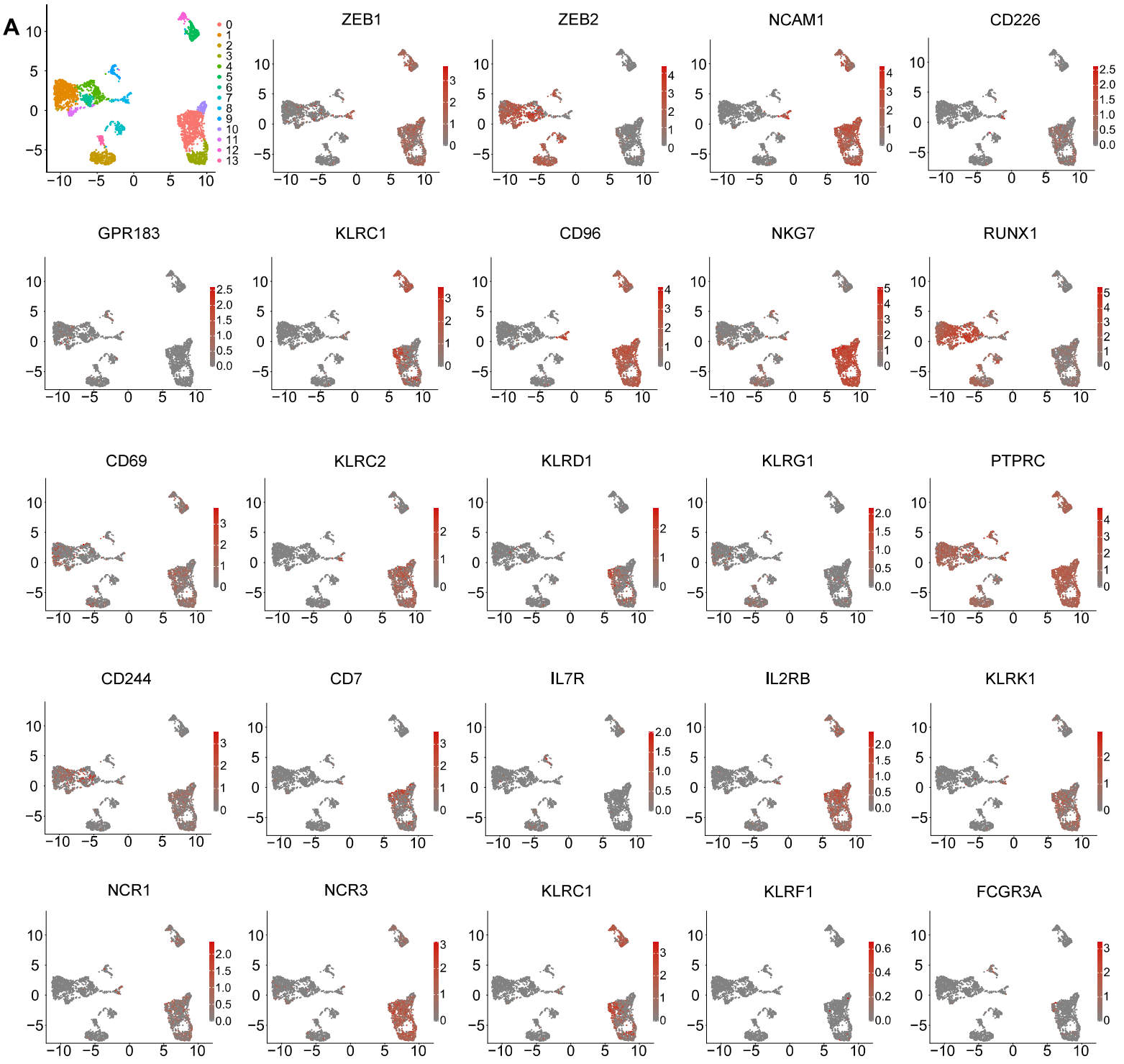
Sup. Fig. 1


A
Meso 1a Medium
Meso 1b Medium
Meso 2 Medium
Meso 2 Medium
Day 0
Day 1
Day 4
Day 7
Day 10
70 RPM
85 RPM
B
Before
After
C
CD34%
Before
After
D
Adherent
Suspension
E
% Frequency
CD56-(Suspension)
CD56-(Adherent)
CD56+ (Suspension)
CD56+ (Adherent)
F
CD56+CD45+CD3-
CD16 -
CD16 +
Suspension
CD56
CD45
CD3
CD16
G
Adherent
Suspension
20µm
20µm
H
MFI NKG2D
MFI TIGIT
MFI NKG2A
MFI NKG2C
MFI CD94
MFI CD25
CD56
CD16
I
Isotype
CD56+CD16+
CD56+CD16-
CD56-CD16-
% of Max
DNAM-1
TIGIT
CD96
CD69
NKG2A
NKG2C
CD94
NKG2D
CD25
J
% DNAM-1
% CD96
% CD69
% TIGIT
% NKG2D
% NKG2A
% NKG2C
% CD25
% CD94
CD56
CD16

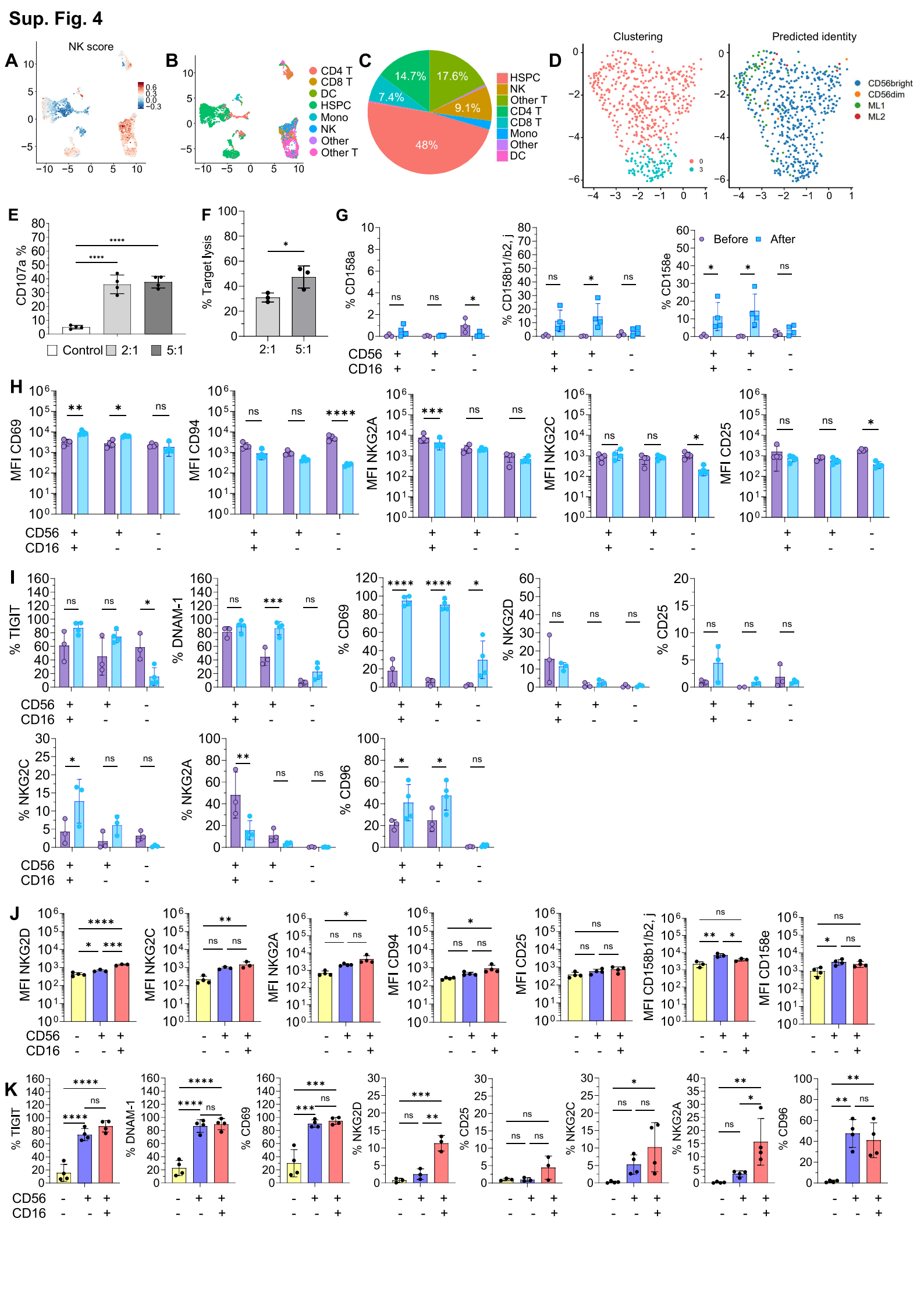
Sup. Fig. 2


A
CD56
CD158a
CD158e
CD158b1/b2,j
0.096
0.24
0.38
1.44
0.27
0.84
B
% CD158a
% CD158b
% CD158e
ns
CD56
CD16

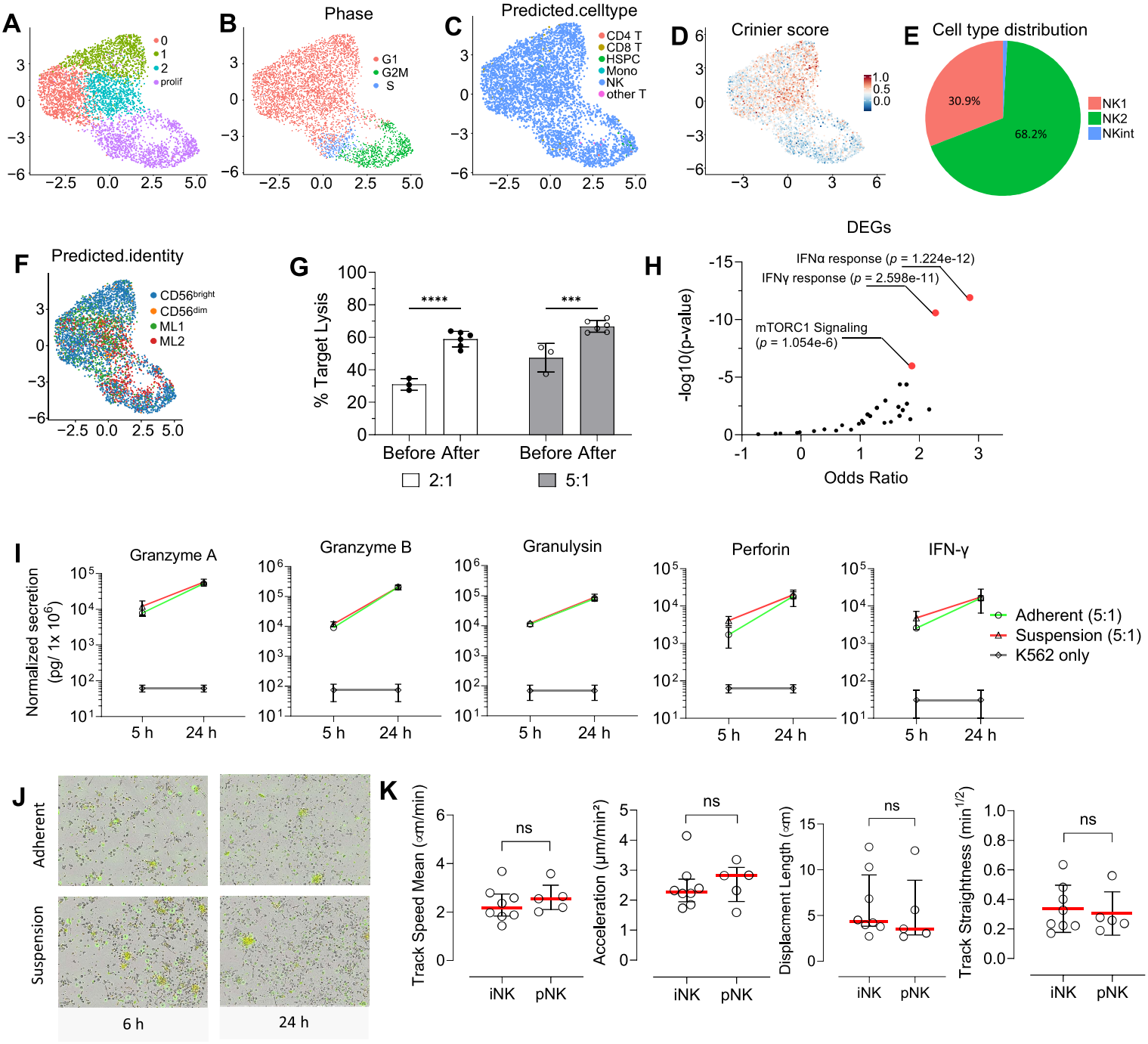
Sup. Fig. 3


A
ZEB1
ZEB2
NCAM1
CD226
GPR183
KLRC1
CD96
NKG7
RUNX1
CD69
KLRC2
KLRD1
KLRG1
PTPRC
CD244
CD7
IL7R
IL2RB
KLRK1
NCR1
NCR3
KLRC1
KLRF1
FCGR3A

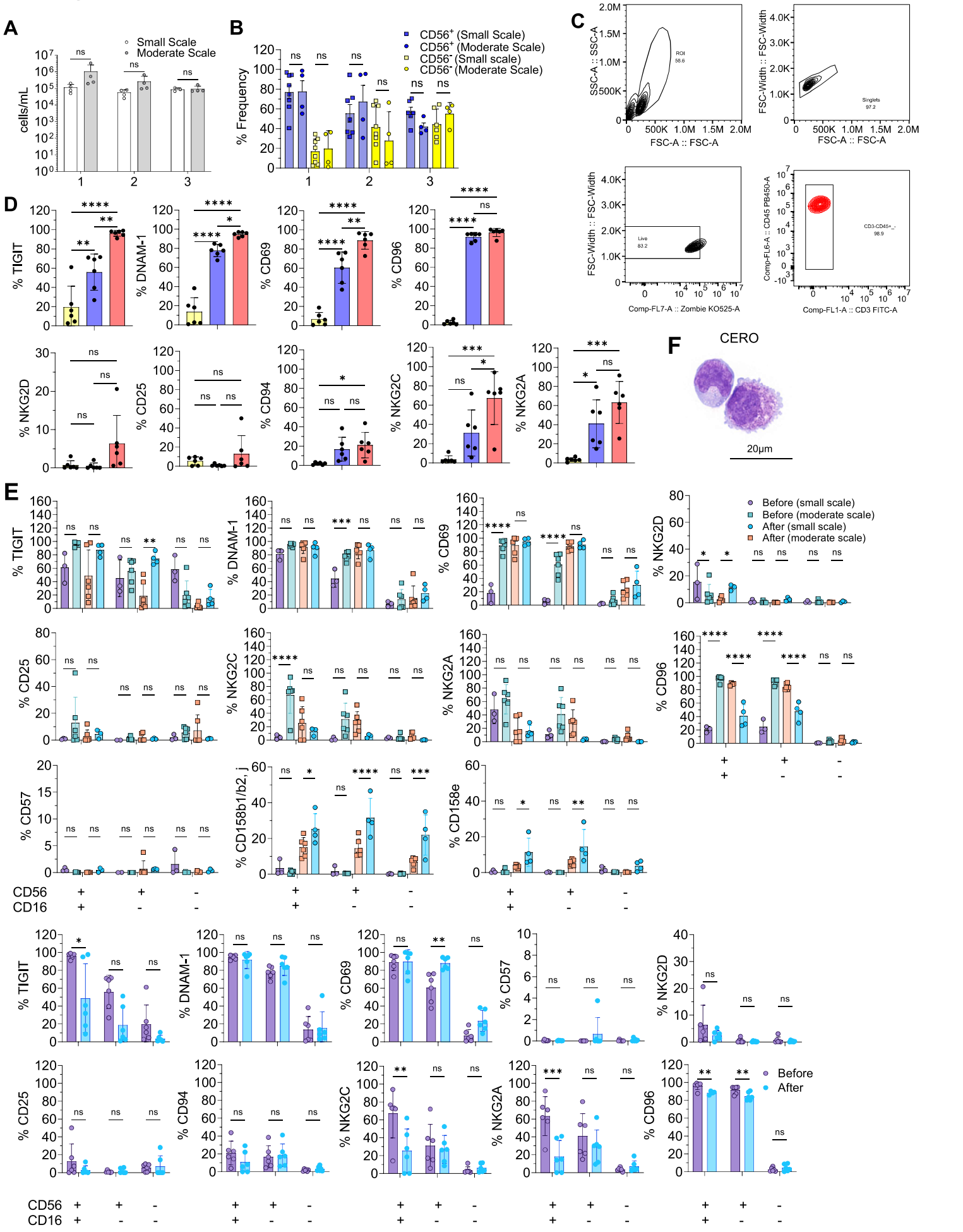
Sup. Fig. 4


A
NK score
B
CD4 T
CD8 T
DC
HSPC
Mono
NK
Other
Other T
C
14.7%
17.6%
7.4%
9.1%
48%
HSPC
NK
Other T
CD4 T
CD8 T
Mono
Other
DC
D
Clustering
Predicted identity
CD56bright
CD56dim
ML1
ML2
E
CD107a %
Control
2:1
5:1
F
% Target lysis
2:1
5:1
G
% CD158a
% CD158b1/b2, j
% CD158e
Before
After
CD56
CD16
H
MFI CD69
MFI CD94
MFI NKG2A
MFI NKG2C
MFI CD25
I
% TIGIT
% DNAM-1
% CD69
% NKG2D
% CD25
% NKG2C
% NKG2A
% CD96
J
MFI NKG2D
MFI NKG2C
MFI NKG2A
MFI CD94
MFI CD25
MFI CD158b1/b2, j
MFI CD158e
K
% TIGIT
% DNAM-1
% CD69
% NKG2D
% CD25
% NKG2C
% NKG2A
% CD96

Sup. Fig. 5


A
0
1
2
prolif
B
Phase
G1
G2M
S
C
Predicted.celltype
CD4 T
CD8 T
HSPC
Mono
NK
other T
D
Crinier score
1.0
0.5
0.0
E
Cell type distribution
30.9%
68.2%
NK1
NK2
NKint
F
Predicted.identity
CD56bright
CD56dim
ML1
ML2
G
% Target Lysis
****
***
Before After
Before After
2:1
5:1
H
DEGs
IFNα response (p = 1.224e-12)
IFNγ response (p = 2.598e-11)
mTORC1 Signaling
(p = 1.054e-6)
-log10(p-value)
Odds Ratio
I
Granzyme A
Granzyme B
Granulysin
Perforin
IFN-γ
Normalized secretion
(pg/ 1x 10^6)
5 h
24 h
Adherent (5:1)
Suspension (5:1)
K562 only
J
Adherent
Suspension
6 h
24 h
K
Track Speed Mean (μm/min)
Acceleration (μm/min²)
Displacment Length (μm)
Track Straightness (min^1/2)
ns
iNK
pNK

Sup Fig. 6


A
Small Scale
Moderate Scale
cells/mL
B
CD56+ (Small Scale)
CD56+ (Moderate Scale)
CD56- (Small scale)
CD56- (Moderate Scale)
% Frequency
C
SSC-A :: SSC-A
FSC-A :: FSC-A
FSC-Width :: FSC-Width
Singlets
Live
Comp-FL7-A :: Zombie KO525-A
Comp-FL6-A :: CD45 PB450-A
Comp-FL1-A :: CD3 FITC-A
D
% TIGIT
% DNAM-1
% CD69
% CD96
% NKG2D
% CD25
% CD94
% NKG2C
% NKG2A
F
CERO
20µm
E
Before (small scale)
Before (moderate scale)
After (small scale)
After (moderate scale)
% CD57
% CD158b1/b2, j
% CD158e
CD56
CD16
Before
After

Sup. Fig. 7

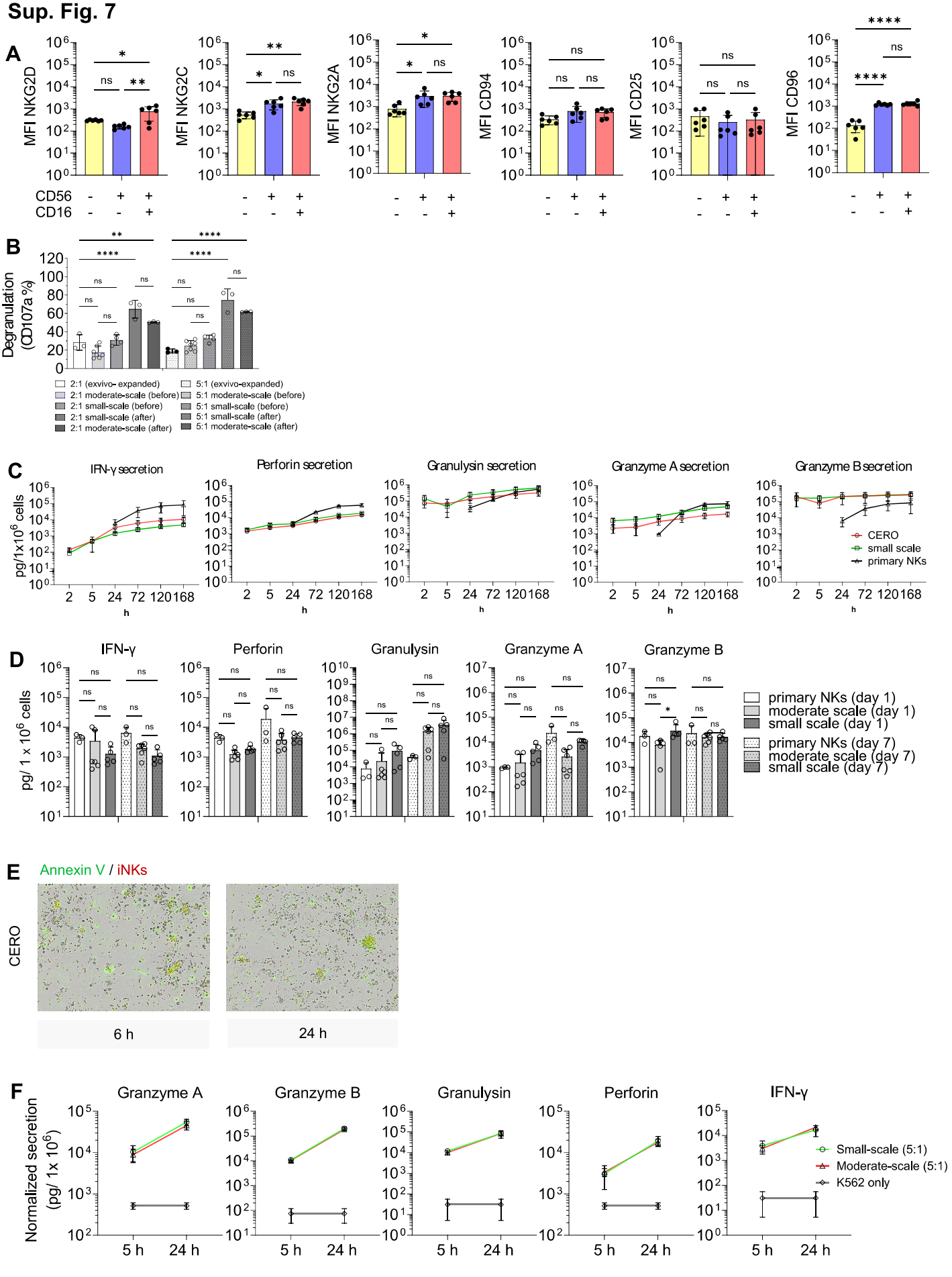

A
MFI NKG2D
MFI NKG2C
MFI NKG2A
MFI CD94
MFI CD25
MFI CD96
CD56
CD16
B
Degranulation (CD107a %)
2:1 (exvivo- expanded)
2:1 moderate-scale (before)
2:1 small-scale (before)
2:1 small-scale (after)
2:1 moderate-scale (after)
5:1 (exvivo-expanded)
5:1 moderate-scale (before)
5:1 small-scale (before)
5:1 small-scale (after)
5:1 moderate-scale (after)
C
IFN-γ secretion
Perforin secretion
Granulysin secretion
Granzyme A secretion
Granzyme B secretion
pg/1x10^6 cells
h
CERO
small scale
primary NKs
D
IFN-γ
Perforin
Granulysin
Granzyme A
Granzyme B
pg/ 1 x 10^6 cells
primary NKs (day 1)
moderate scale (day 1)
small scale (day 1)
primary NKs (day 7)
moderate scale (day 7)
small scale (day 7)
E
Annexin V / iNKs
CERO
6 h
24 h
F
Granzyme A
Granzyme B
Granulysin
Perforin
IFN-γ
Normalized secretion (pg/ 1x 10^6)
5 h
24 h
Small-scale (5:1)
Moderate-scale (5:1)
K562 only

Table S1: Key resources

Reagent or resource	Source	Identifier
Antibodies		
CD34	Invitrogen	Cat#11-0349-41
CD144	Invitrogen	Cat#17-1449-42
CD43	BD Biosciences	Cat#560199
CD45	Invitrogen	Cat#25-0459-42
TRA-1-60	BioLegend	Cat#330610
KDR (CD309)	BioLegend	Cat#359911
SSEA-4	Invitrogen	Cat#53-8843-41
CD56	Biolegend	Cat#362511
CD3	ebioscience	Cat#11-0036
CD45	ebioscience	Cat#48-0459-41
CD16	ebioscience	Cat#25-0168-41
CD107a	ebioscience	Cat#12-1159-41
CD335/NKp46	Miltenyi	Cat#130-112-281
CD336/NKp44	Miltenyi	Cat#130-120-356
CD337/NKp30	Miltenyi	Cat#130-112-503
KLRG1	Miltenyi	Cat#130-120-565
CD56	Miltenyi	Cat#130-114-548
CD16	Miltenyi	Cat#130-113-395
CD3	BD Biosciences	561416
CD3	BD Biosciences	345766
CD16	BD Biosciences	557758
CD25	Beckman Coulter	IM0478U
CD45	Biolegend	304032
CD45	Biolegend	304024
CD56	BD Biosciences	555516
CD56	Beckman Coulter	IM 2474
CD57	BD Biosciences	563896
CD69	BD Biosciences	555530
CD94	BD Biosciences	555888
CD96 v2	R&D Systems	FAB6199N
CD158a (p58.1)	BD Biosciences	340531
CD158b (p58.2)	Immunotech (B. Coulter)	IM 2278U
CD158e	B. Coulter	IM99510
CD159c (NKG2C)	R&D Systems	FAB138P
CD159a (NKG2A)	Beckman Coulter	B10246
CD226 (DNAM-1)	BD Biosciences	559789

CD314 (NKG2D)	Invitrogen (eBioscience)	17-5878-42
TIGIT	BD Biosciences	747844
IgG1	BD Biosciences	339185
IgG1 kappa	Invitrogen (eBioscience)	47-4714-80
IgG1	Biolegend	400157
IgG1	BD Biosciences	555749
IgG1	BD Biosciences	555748
IgG1	Biolegend	400126
IgG1	eBioscience	45-4714-82
IgG1	Beckman Coulter	A07797
IgG2a	BD Biosciences	340473
IgG2a	BD Biosciences	349054
IgM	BD Biosciences	555782
Chemicals, peptides and recombinant proteins		
DMEM/F-12	Gibco	#11330032
Ascorbic Acid 2-phosphate	Sigma-Aldrich	#A8960
Sodium Selenite	Sigma-Aldrich	#S5261
NaHCO3	Sigma-Aldrich	#S6014
Insulin	PAN	#P07-04300
Human Recombinant Transferrin	Sigma-Aldrich	#T0665
bFGF	Peprotech	#100-18B
TGFβ1	Peprotech	#100-21C
Geltrex™	ThermoFisher Scientific	#A1413201
Vitronectin	Thermofisher Scientific	A400457
Y27632 (ROCK-Inhibitor)	Tocris	# 1254/50
Accutase™	Sigma-Aldrich	# A6964
hVEGF	Peprotech	#AF-100-20A
hBMP4	Peprotech	#120-05ET
hSCF	Peprotech	#300-07
hIL-3	Peprotech	#200-03
X-Vivo 15	LONZA	#02-060F
hIL-7	Peprotech	200-07-10UG
hIL-15	Peprotech	200-15-10UG
hFLT3	Peprotech	300-19-10UG
hIL-2	Peprotech	AF-200-02-50UG
Xpander basal media	Gibco	A5019001
Xpander supplement (50x)	Gibco	A5019001
Human AB sera	Sigma-Aldrich	H4522-100ML
Glutamax	Gibco	35050061
Penicillin-streptomycin	Gibco	15140122

2-mercaptoethanol	Gibco	31350-010
L-glutamine	Invitrogen	25030081
Human FcR blocker	Miltenyi	Cat#130-059-901
Zombie Aqua fixable viability kit	Biolegend	423101
Monensin	eBioscience	00-4505-51
Caspases 3/7	Sartorius	Cat#4440
May-Grünwald solution	Roth	T863.1
Giemsa solution	Roth	T862.1
ROTI®Histokitt	Roth	6638.1
Experimental models: cell lines		
LiPSC-GR1.1	NIH	N/A
K562	DMSZ, Braunschweig, Germany	N/A
K562-OX40L+mbIL18/21	Duck Cho lab	N/A
Software and algorithms		
Graphpad prism		
Fiji	https://imagej.net/software/fiji/	

Table S2: Natural killer cell characterization

Antigen	Amount per reaction	Fluorochrome	Catalog number	Manufacturer
CD56	1:50	APC-Cy7	362511	Biolegend
CD3	1:100	FiTC	11-0036	ebioscience
CD45	1:50	Ef450	48-0459-41	ebioscience
CD16	1:50	PE-Cy7	25-0168-41	ebioscience
CD107a	1:50	PE	12-1159-41	ebioscience
CD335/NKp46	1:100	PE-Vio 770	130-112-281	Miltenyi
CD336/NKp44	1:100	PE	130-120-356	Miltenyi
CD337/NKp30	1:100	APC	130-112-503	Miltenyi
KLRG1	1:100	FITC	130-120-565	Miltenyi
CD56	1:100	APC-Vio 770	130-114-548	Miltenyi
CD16	1:100	PerCP-Vio 700	130-113-395	Miltenyi
CD3	2.5 µL	V500	561416	BD Biosciences
CD3	3 µL	PerCP	345766	BD Biosciences
CD16	3 µL	APC-Cy7	557758	BD Biosciences
CD25	4 µL	FITC	IM0478U	Beckman Coulter
CD45	3 µL	BV421	304032	Biolegend
CD45	1 µL	AF700	304024	Biolegend
CD56	10 µL	PE	555516	BD Biosciences
CD56	2 µL	APC	IM 2474	Beckman Coulter
CD57	0.25 µL	BV421	563896	BD Biosciences
CD69	10 µL	FITC	555530	BD Biosciences
CD94	4 µL	FITC	555888	BD Biosciences
CD96 v2	2.5 µL	AF700	FAB6199N	R&D Systems
CD158a (p58.1)	2 µL	FITC	340531	BD Biosciences
CD158b (p58.2)	2 µL	PE	IM 2278U	Immunotech (B. Coulter)
CD158e	2 µL	ECD	IM99510	B. Coulter
CD159c (NKG2C)	5 µL	PE	FAB138P	R&D Systems
CD159a (NKG2A)	10 µL	PE-Cy7	B10246	Beckman Coulter
CD226 (DNAM-1)	10 µL	PE	559789	BD Biosciences
CD314 (NKG2D)	1 µL	APC	17-5878-42	Invitrogen (eBioscience)
TIGIT	2.5 µL	BV421	747844	BD Biosciences

IgG1	2 µL	V500/ Amcyan	339185	BD Biosciences
IgG1 kappa	2 µL	APC eFluor780	47-4714-80	Invitrogen (eBioscience)
IgG1	5 µL	BV421	400157	Biolegend
IgG1	2 µL	PE	555749	BD Biosciences
IgG1	5 µL	FITC	555748	BD Biosciences
IgG1	5 µL	PE-Cy7	400126	Biolegend
IgG1	5 µL	PerCP-Cy5.5	45-4714-82	eBioscience
IgG1	2µL	ECD	A07797	Beckman Coulter
IgG2a	2 µL	APC	340473	BD Biosciences
IgG2a	2 µL	PerCP	349054	BD Biosciences
IgM	2 µL	FITC	555782	BD Biosciences

Table S3: HLA type of lung tissue and peripheral blood donors

Locus	**Lung tissue donor**	**Blood donor**
HLA-A	A*02:01:01:01/ A*11:01:01:01	A*02:01:01:01/ A*02:01:01:01
HLA-B	B*07:02:01:01/ B*55:01:01:01	B*07:02P
HLA-C	C*07:02:01:01/ C*03:03:01:01	C*07:02:01:01/ C*07:02:01:01
HLA-DRB1	DRB1*07:01:01:01 / DRB1*14:01:01	DRB1*08:01:01:01 / DRB1*06:02P
HLA-DQB1	DQB1*02:02:01:01 / DQB1*08:03:01:01	DQB1*08:01:01:01 / DQB1*08:01:01:01

Supplemental information

Sup. Fig. 1: Morphological and phenotypic evaluation of small-scale generation of iNK cells **A** Schematic representation of small-scale (6 well) self-aggregation and mesoderm induction. **B** Mesoderm primed aggregates before iNK (left) and after iNK production (right) (scale bar 200 µm). **C** Quantitative analysis of mesoderm primed aggregates in (b), T-Test. **D** Gating strategy of produced iNK cells SSC-A vs FSC-A, singlets, for adherent-based differentiation (left) and suspension- based differentiation (right). **E** Comparative analysis between adherent- and suspension- based iNK cultures for frequency of $CD56^+$ proportions across all sequential harvests (means ± SD, n = 3-4), two-way ANOVA with Tukey's multiple comparisons test. **F** Representative immunophenotypic plot of suspension-based differentiation, cells were pre-gated on scatter profile (SSC-A vs FSC-A), singlets (FSC-W vs FSC-A), $CD45^+CD3^-$ viable cells, and identified 3 major populations $CD56^-CD16^-$ (yellow), $CD56^+CD16^-$ (violet), $CD56^+CD16^+$ (red), one-way ANOVA with Tukey's multiple comparisons test. **G** Representative cytospin images of iNK cells generated in adherent (left) and suspension (right) (scale bar 20 µm). **H** iNK receptor assessment (NKG2D, TIGIT, NKG2A, NKG2C, CD94, CD25) MFI expression levels within iNK subsets before expansion, the cells were pre-gated on scatter profile (SSC-A vs FSC-A), singlets (FSC-W vs FSC-A), viable, and identified 3 major populations $CD56^-CD16^-$ (yellow), $CD56^+CD16^-$ (violet), $CD56^+CD16^+$ (red), (mean ± n = 3-4), one-way ANOVA with Tukey's multiple comparisons test. **I** Representative histogram receptor assessment (DNAM-1, TIGIT, CD96, CD94, NKG2D, CD25, CD69, NKG2A, NKG2C) of 3 major populations $CD56^-CD16^-$ (yellow), $CD56^+CD16^-$ (violet), $CD56^+CD16^+$ (red), overlayed in comparison to isotype control (grey). **J** iNK receptor assessment (NKG2D, TIGIT, NKG2A, NKG2C, CD94, CD25) percentage frequency within iNK subsets before expansion (mean ± SD, n = 3), one-way ANOVA with Tukey's multiple comparisons test.

Sup. Fig. 2: KIR Expression analysis of small-scale iNK cell subsets before expansion **A** Representative KIR receptors (CD158a, CD158b1/b2/j, CD158e) assessment within iNK subsets before expansion, 3 major populations $CD56^-CD16^-$ (yellow), $CD56^+CD16^-$ (violet), $CD56^+CD16^+$ (red). **B** iNK KIR receptor assessment (CD158a, CD158b1/b2/j, CD158e) percentage frequency within iNK subsets before expansion, the cells were pre-gated on scatter profile (SSC-A vs FSC-A), singlets (FSC-W vs FSC-A), viable, and identified 3 major populations $CD56^-CD16^-$ (yellow), $CD56^+CD16^-$ (violet), $CD56^+CD16^+$ (red), (mean ± SD, n = 3), one-way ANOVA with Tukey's multiple comparisons test.

Sup. Fig. 3: Single-cell analysis of iNK cell subsets before expansion A Uniform Manifold Approximation and Projection (UMAP) representing scRNA-seq of iNK cells before expansion (left), and UMAP feature plots for global expression genes (*ZEB1, ZEB2, NCAM1, CD226, GPR183, KLRC1, CD96, NKG7, RUNX1, CD69, KLRC2, KLRD1, KLRG1, PTPRC, CD244, CD7, IL7R, IL2RB, KLRK1, NCR1, NCR3, KLRC1, KLRF1, FCGR3A*).

Sup. Fig. 4: Evaluation of iNK cells before and after expansion A UMAP feature plot of NK score [40], demonstrating global expression. **B** Cell type annotation of the cells produced before expansion [47-50] in UMAP illustration. **C** Pie chart of cell type frequencies produced before expansion. **D** UMAP clusters of mature iNK cells prior to expansion (left). Functional annotation of iNK subsets ($CD56^{bright}$, $CD56^{dim}$, ML1, and ML2). **E** CD107a degranulation assay measuring surface expression of CD107a on iNK cells following co-culture with K-562 target cells (mean ± SD, n = 4), one-way ANOVA with Dunnett's multiple comparisons test. **F** Chromium-release assay evaluating iNK mediated killing of K-562 target cells at effector-to-target (E:T) ratios of 2:1 and 5:1 before expansion (mean ± SD, n = 3), T-test. **G** iNK KIR receptor assessment (CD158a, CD158b1/b2/j, CD158e) percentage frequency within iNK subsets before and after expansion within iNK subsets (mean ± SD, n = 3), two-way ANOVA with Šídák's multiple comparisons test. **H** iNK receptor assessment (CD69, CD94, NKG2A, NKG2C, CD25) MFI expression level within iNK subsets before and after expansion (mean ± SD, n = 4), two-way ANOVA with Šídák's multiple comparisons test. **I** iNK receptor assessment (TIGIT, DNAM-1, CD69, NKG2D, CD25, NKG2C, NKG2A, CD96) percentage frequency within iNK subsets before and after expansion (mean ± SD, n = 4), two-way ANOVA with Šídák's multiple comparisons test. **J** MFI expression of selected receptors (NKG2D, NKG2C, NKG2A, CD94, CD25, CD158b, and CD158e) across expanded iNK subsets (means ± SD, adherent: n = 2, suspension: n = 2, n = 4), one-way ANOVA with Tukey's multiple comparisons test. **K** Percentage expression of selected receptors (TIGIT, DNAM-1, CD69, NKG2D, CD25, NKG2C, NKG2A, and CD96) across expanded iNK subsets (means ± SD, adherent: n = 2, suspension: n = 2, n = 4), one-way ANOVA with Tukey's multiple comparisons test.

Fig. S5: Transcriptomic and functional evaluation of iNK cells after expansion in small-scale culture A Uniform Manifold Approximation and Projection (UMAP) representing iNK cells after expansion. **B** UMAP illustration of cell cycle analysis of iNK cells after expansion. **C** UMAP illustration of cell type annotation of subsets after expansion. **D** UMAP feature plot of Crinier 13 gene score of iNK cells after expansion. **E** Pie chart representation iNK cells in relation to the NK subset classification (NK1, NK2, NKint). **F** UMAP illustration of NK functional [41] annotation of subsets after expansion. **G** Chromium-release assay evaluating iNK-

mediated killing of K-562 target cells before and after expansion at effector-to-target (E:T) ratios of 2:1 and 5:1 (mean ± SD, n = 3-6), Two-way ANOVA with Šídák's multiple comparisons test. **H** GSEA of top 5 differentially expressed genes (DEGs) among iNK cell clusters highlighting significant enrichment of interferon-related pathways (IFN-α response, IFN-γ response) and mTORC1 signaling. The x-axis shows odds ratios and the y-axis shows $-\log_{10}$ (p values). **I** Secretome analysis (Granzyme A, Granzyme B, Granulysin, Perforin, IFN- γ) of adherent- and suspension- based iNK cells during apoptosis analysis at 5 and 24 h post co-culture (mean ± SD, n = 3). **J** Immunofluorescence images of adherent- and suspension-based iNK (red) mediated apoptosis (green) of target K562 at 5 and 24 h (20x magnification). **K** Analysis of migration behavior of iNK cells and pNK cells in HCMV-infected PCLS. Data are derived from 15 min imaging videos. Each dot represents the median across all tracks for each video and lung slice. Red bars represent median ± IQRs, T-test.

Fig. S6 Comparative characterization of iNK cells generated at small- and moderate-scales A Comparative analysis of cell yield between small-scale (suspension) with moderate-scale (mean ± SD, n = 4), Two-way ANOVA with Šídák's multiple comparisons test. **B** Comparative analysis of between small-scale (suspension) with moderate-scale for $CD56^+$ and $CD56^-$ expression across all harvests (mean ± SD, n = 4-8), Two-way ANOVA with Tukey's multiple comparisons test. **C** Representative immunophenotypic plot of bioreactor-based differentiation, cells were pre-gated on scatter profile (SSC-A vs FSC-A), singlets (FSC-W vs FSC-A), viable, and $CD45^+CD3^-$. **D** iNK receptor assessment (TIGIT, DNAM-1, CD69, CD96, NKG2D, CD25, CD94, NKG2C, NKG2A) percentage frequency within iNK subsets before expansion (mean ± SD, n = 6), one-way ANOVA with Tukey's multiple comparisons test. **E** Comparative analysis of receptor expression on iNK cells generated at small- and moderate-scale production. Percentage frequencies of iNK cell subsets expressing (TIGIT, DNAM-1, CD69, NKG2D, CD25, NKG2C, NKG2A, CD96, CD57, CD158b1/b2/j, and CD158e) were assessed by flow cytometry before and after expansion. Receptor expression profiles were compared between small-scale (suspension culture) and moderate-scale manufacturing conditions (mean ± SD, n = 3-6), Two-way ANOVA with Šídák's multiple comparisons test. **F** Representative cytospin images of iNK cells generated in moderate scale bioreactors (scale bar 20 µm). **G** iNK receptor assessment (TIGIT, DNAM-1, CD69, CD57, NKG2D, CD25, CD94, NKG2C, NKG2A, CD96) percentage frequency within iNK subsets before and after expansion within iNK subsets (mean ± SD, n = 6), Two-way ANOVA with Šídák's multiple comparisons test.

Fig. S7 Functional comparison of iNK cells generated at small- and moderate- scales A iNK receptor assessment (NKG2D, NKG2C, NKG2A, CD94, CD25, CD96) MFI level of expression within iNK subsets after expansion (mean ± SD, n = 6), one-way ANOVA with Tukey's multiple comparisons test. **B** Cytotoxic activation against K562 determined by CD107a activity of expanded *ex vivo* NKs and iNK cells before and after expansion (means ± SD, n = 3-7), one-way ANOVA with Tukey's multiple comparisons test. **C** Cumulative secretion of effector cytokines (IFN- γ, perforin, granulysin, granzyme A, and granzyme B) during expansion in iNK cells generated in small- and moderate- scale in comparison to *ex vivo* expanded NK cells (mean ± SD, n = 3-7). **D** Secretome secretion of effector cytokines (IFN-γ, perforin, granulysin, granzyme A, and granzyme B) at day 1 and 7 of expansion (mean ± SD, n = 3-7), one-way ANOVA with Dun's multiple comparisons test. **E** Immunofluorescence images of moderate scale iNK cell (red) mediated apoptosis (green) of target K562 at 5 and 24 h (20x magnification). **F** Secretome analysis (granzyme A, granzyme B, granulysin, perforin, IFN-γ) of small-scale suspension and moderate-scale iNKs during apoptosis analysis at 5 and 24 hours post co-culture (mean ± SD, n = 3).