

Materials List for

Profiling of the Human Natural Killer Cell Receptor-Ligand Repertoire

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Materials

Name	Company	Catalog Number	Comments
⁸⁹ Y	Sigma-Aldrich	204919	
102-Palladium nitrate	Trace Sciences International	Special Order	
104-Palladium nitrate	Trace Sciences International	Special Order	
106-Palladium nitrate	Trace Sciences International	Special Order	
108-Palladium nitrate	Trace Sciences International	Special Order	
¹¹⁵ In	Trace Sciences International	Special Order	
¹⁴¹ Pr	Fluidigm	201141A	
¹⁴² Nd	Fluidigm	201142A	
¹⁴³ Nd	Fluidigm	201143A	
¹⁴⁴ Nd	Fluidigm	201144A	
¹⁴⁵ Nd	Fluidigm	201145A	
¹⁴⁶ Nd	Fluidigm	201146A	
¹⁴⁷ Sm	Fluidigm	201147A	
¹⁴⁸ Nd	Fluidigm	201148A	
¹⁴⁹ Sm	Fluidigm	201149A	
¹⁵⁰ Nd	Fluidigm	201150A	
¹⁵¹ Eu	Fluidigm	201151A	
¹⁵² Sm	Fluidigm	201152A	
¹⁵³ Eu	Fluidigm	201153A	
¹⁵⁴ Sm	Fluidigm	201154A	
¹⁵⁵ Gd	Fluidigm	201155A	

¹⁵⁶ Gd	Fluidigm	201156A	
¹⁵⁷ Gd	Trace Sciences International	N/A	
¹⁵⁸ Gd	Fluidigm	201158A	
¹⁵⁹ Tb	Fluidigm	201159A	
¹⁶⁰ Gd	Fluidigm	201160A	
¹⁶¹ Dy	Fluidigm	201161A	
¹⁶² Dy	Fluidigm	201162A	
¹⁶³ Dy	Fluidigm	201163A	
¹⁶⁴ Dy	Fluidigm	201164A	
¹⁶⁵ Ho	Fluidigm	201165A	
¹⁶⁶ Er	Fluidigm	201166A	
¹⁶⁷ Er	Fluidigm	201167A	
¹⁶⁸ Er	Fluidigm	201168A	
¹⁶⁹ Tm	Fluidigm	201169A	
¹⁷⁰ Er	Fluidigm	201170A	
¹⁷¹ Yb	Fluidigm	201171A	
¹⁷² Yb	Fluidigm	201172A	
¹⁷³ Yb	Fluidigm	201173A	
¹⁷⁴ Yb	Fluidigm	201174A	
¹⁷⁵ Lu	Fluidigm	201175A	
¹⁷⁶ Yb	Fluidigm	201176A	
²⁰⁹ Bi anti-CD16	Fluidigm	3209002B	Clone 3G8. Used at a 1:50 dilution.
697 cells	Creative Bioarray	CSC-C0217	
Amicon Ultra Centrifugal Filter Units 0.5 with Ultracel-30 Membrane, 30 kDa	Millipore	UFC503096	
Anhydrous acetonitrile	Fisher Scientific	BP1165-50	
anti-2B4	Biolegend	329502	Clone C1.7.
anti-B7-H6	R&D Systems	MAB7144	Clone 875001.
anti-CCR2	Biolegend	357202	Clone K036C2.
anti-CD2	Biolegend	300202	Clone RPA-2.10.
anti-CD3	Biolegend	300402	Clone UCHT1.
anti-CD4	Biolegend	317402	Clone OKT4.
anti-CD4	Biolegend	344602	Clone SK3.
anti-CD7	Biolegend	343102	Clone CD7-6B7.
anti-CD8	Biolegend	344702	Clone SK1.
anti-CD11b	Biolegend	301302	Clone ICRF44.
anti-CD14	Biolegend	301802	Clone M5E2.
anti-CD19	Biolegend	302202	Clone HIB19.
anti-CD33	Biolegend	303402	Clone WM53.
anti-CD38	Biolegend	303502	Clone HIT2.
anti-CD48	Biolegend	336702	Clone BJ40.
anti-CD56	BD Pharmingen	559043	Clone NCAM16.2.

anti-CD57	Biolegend	322302	Clone HCD57.
anti-CD62L	Biolegend	304802	Clone DREG-56.
anti-CD69	Biolegend	310902	Clone FN50.
anti-CD94	Biolegend	305502	Clone DX22.
anti-CD95	Biolegend	305602	Clone DX2.
anti-CD155	Biolegend	337602	Clone SKII.4.
anti-CXCR6	Biolegend	356002	Clone K041E5.
anti-DNAM-1	BD Biosciences	559787	Clone DX11.
anti-DR4	Biolegend	307202	Clone DJR1.
anti-DR5	Biolegend	307302	Clone DJR2-2.
anti-FAS-L	Biolegend	306402	Clone NOK-1.
anti-FcRg	Millipore	06-727	Polyclonal antibody.
anti-HLA-C,E	Millipore	MABF233	Clone DT9.
anti-HLA-Bw4	Miltenyi Biotec	Special Order	Clone REA274.
anti-HLA-Bw6	Miltenyi Biotec	130-124-530	Clone REA143.
anti-HLA-DR	Biolegend	307602	Clone L243.
anti-HLA-E	Biolegend	342602	Clone 3D12.
anti-ICAM-1	Biolegend	353102	Clone HA58.
anti-Ki-67	Biolegend	350502	Clone Ki-67.
anti-KIR2DL1/KIR2DS5	R&D Systems	MAB1844	Clone 143211.
anti-KIR2DL3	R&D Systems	MAB2014	Clone 180701.
anti-KIR2DL5	Miltenyi Biotec	130-096-200	Clone UP-R1.
anti-KIR2DS4	R&D Systems	MAB1847	Clone 179315.
anti-KIR3DL1	BD Biosciences	555964	Clone DX-9.
anti-LFA-3	Biolegend	330902	Clone TS2/9.
anti-LILRB1	R&D Systems	292319	Clone MAB20172.
anti-LLT-1	R&D Systems	AF3480	Clone 402659.
anti-MICA	R&D Systems	MAB1300-100	Clone 159227.
anti-MICB	R&D Systems	MAB1599-100	Clone 236511.
anti-Nectin-1	Biolegend	340402	Clone R1.302.
anti-Nectin-2	Biolegend	337402	Clone TX31.
anti-NKG2A	R&D Systems	MAB1059	Clone 131411.
anti-NKG2C	R&D Systems	MAB1381	Clone 134522.
anti-NKG2D	Biolegend	320802	Clone 1D11.
anti-NKp30	Biolegend	325202	Clone P30-15.
anti-NKp44	Biolegend	325102	Clone P44-8.
anti-NKp46	Biolegend	331902	Clone 9E2.
anti-NTB-A	Biolegend	317202	Clone NT-7.
anti-Pan HLA class I	Biolegend	311402	Clone W6/32.
anti-PD1	Biolegend	329902	Clone EH12.2H7.
anti-Perforin	Abcam	ab47225	Clone B-D48.
anti-Siglec-7	Biolegend	347702	Clone S7.7.
anti-Syk	Biolegend	644302	Clone 4D10.2.
anti-TACTILE	Biolegend	338402	Clone NK92.39.
anti-TIGIT	R&D Systems	MAB7898	Clone 741182.
anti-ULBP-1	R&D Systems	MAB1380-100	Clone 170818.
anti-ULBP-2, 5, 6	R&D Systems	MAB1298-100	Clone 165903.

Antibody Stabilizer	Candor Bioscience	131 050	
Benzonase Nuclease	Millipore	70664	
Bond-Breaker TCEP Solution	Thermo Fisher Scientific	77720	
Bovine Serum Albumin solution	Sigma-Aldrich	A9576	
Calcium chloride dihydrate (CaCl ₂ +2H ₂ O)	Sigma-Aldrich	223506-25G	
Cis-Platinum(II)diamine dichloride (cisplatin)	Enzo Life Sciences	ALX-400-040-M250	A 100 mM stock solution was prepared in DMSO and divided into 25 μ L aliquots. Used at a 25 μ M dilution for live/dead stain. Signal appears in 194Pt and 195Pt channels.
DMSO	Sigma-Aldrich	D2650	
eBioscience Permeabilization Buffer	Thermo Fisher Scientific	00-8333-56	
EDTA (0.5 M)	Hoefer	GR123-100	A double-concentrated HEPES buffer with EDTA was made according to the following recipe: 1.3 g NaCl (Thermo Fisher Scientific), 27 mg CaCl ₂ +2H ₂ O (Sigma-Aldrich), 23 mg MgCl ₂ (Sigma-Aldrich), 83.6 mg KH ₂ PO ₄ (Thermo Fisher Scientific), 4 mL of 1M HEPES (Thermo Fisher Scientific), 2 mL of 0.5M EDTA (Hoefer, Holliston, MA, USA), and 100mL H ₂ O. The pH of this double-concentrated HEPES buffer was adjusted to a pH of 7.3 using 1M HCl and 1M NaOH.
EQ Four Element Calibration Beads	Fluidigm	201078	
Fetal Bovine Serum	Thermo Fisher Scientific	N/A	
Helios mass cytometer	Fluidigm	N/A	
HEPES (1M)	Thermo Fisher Scientific	15630080	
HyClone Antibiotic/Antimycotic Solution (Pen/Strep/Fungizone) solution	Fisher Scientific	SV3007901	
Iridium - 191Ir/193Ir intercalator	DVS Sciences (Fluidigm)	201192B	Used at a 1:10000 dilution.
Isothiocyanobenzyl-EDTA (ITCB-EDTA)	Dojindo Molecular Technologies, Inc.	M030-10	Diluted to 1.25 mg/mL in anhydrous acetonitrile.
K562 cells	American Type Culture Collection (ATCC)	ATCC CCL-243	
L-Glutamine (200 mM)	Thermo Fisher Scientific	SH30034	
Magnesium chloride (MgCl ₂)	Sigma-Aldrich	208337-100G	
Maxpar X8 Antibody Labeling Kits	Fluidigm	N/A	No catalog number as kits come with metals.
Millex-VV Syringe Filter Unit, 0.1 μ m	Millipore	SLVV033RS	
Milli-Q Advantage A10 Water Purification System	Millipore	Z00Q0V0WW	
MS Columns	Miltenyi Biotec		
NALM6 cells	American Type Culture Collection (ATCC)	ATCC CRL-3273	
Nanosep Centrifugal Devices with Omega Membrane 3K	Pall Corporation	OD003C35	
NK Cell Isolation Kit, human	Miltenyi Biotec	130-092-657	
Paraformaldehyde (16%)	Electron Microscopy Sciences	15710	
PBS	Thermo Fisher Scientific	10010023	

Potassium Phosphate Monobasic (KH ₂ PO ₄)	Fisher Scientific	MP021954531	
Qdot 655 anti-CD19	Thermo Fisher Scientific	Q10179	Clone SJ25-C1. Used at a 1:50 dilution. Signal appears in 112Cd-114Cd channels.
Qdot 655 anti-HLA-DR	Thermo Fisher Scientific	Q22158	Clone Tü36. Used at a 1:200 dilution.
Rockland PBS	Rockland Immunochemicals, Inc.	MB-008	Used to make CyPBS (10X Rockland PBS diluted to 1X in Milli-Q water) and CyFACS buffers (10X Rockland PBS diluted to 1X in Milli-Q water with 0.1% BSA and 0.05% sodium azide). Buffers were sterile-filtered through a 0.22 µm filter and stored at 4°C in Stericup bottles.
RPMI 1640	Thermo Fisher Scientific	21870092	
Sodium azide (NaN ₃)	Sigma-Aldrich	S2002	
Sodium chloride (NaCl)	Fisher Scientific	S271-500	
Stericup Quick Release-GP Sterile Vacuum Filtration System	Millipore Sigma	S2GPU10RE	
Tuning solution	Fluidigm	201072	
Washing solution	Fluidigm	201070	