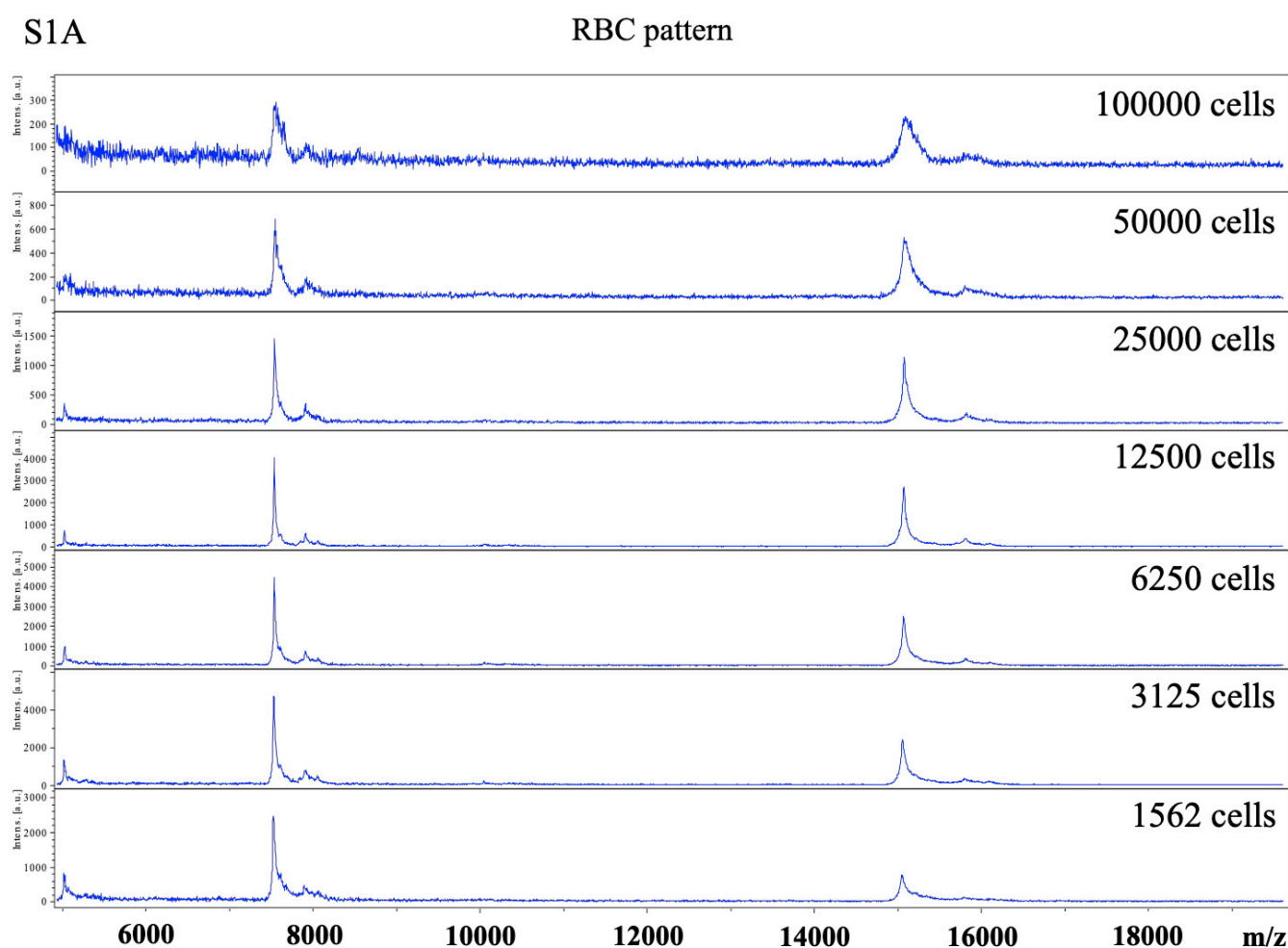


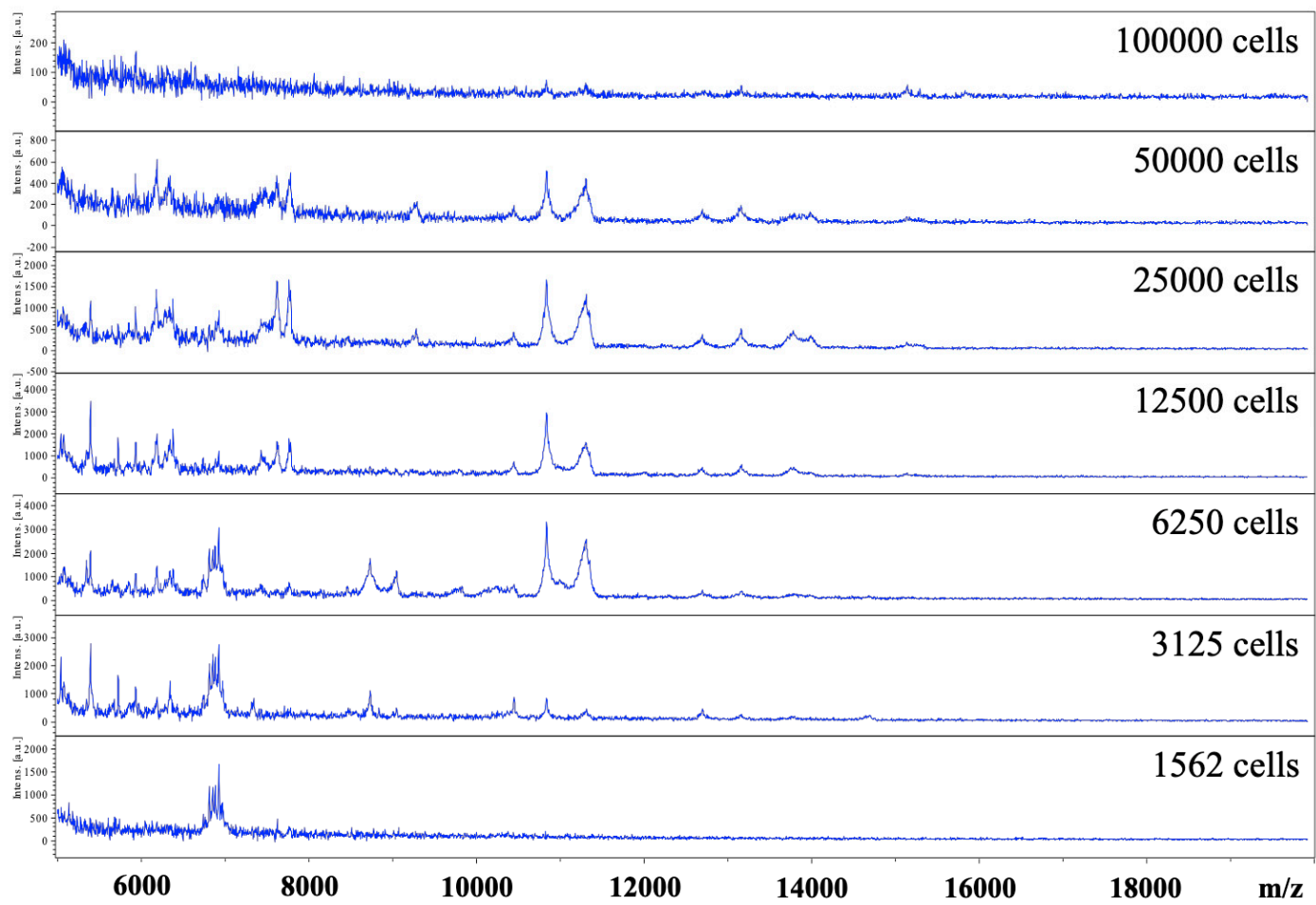
# Cell-Main Spectra Profile Screening Technique in Simulation of Circulating Tumour Cells Using MALDI-TOF Mass Spectrometry

Wararat Chiangjong, Sebastian Chakrit Bhakdi, Noppawan Woramongkolchai, Thitinee Vanichapol, Nutkridta Pongsakul, Suradej Hongeng and Somchai Chutipongtanate



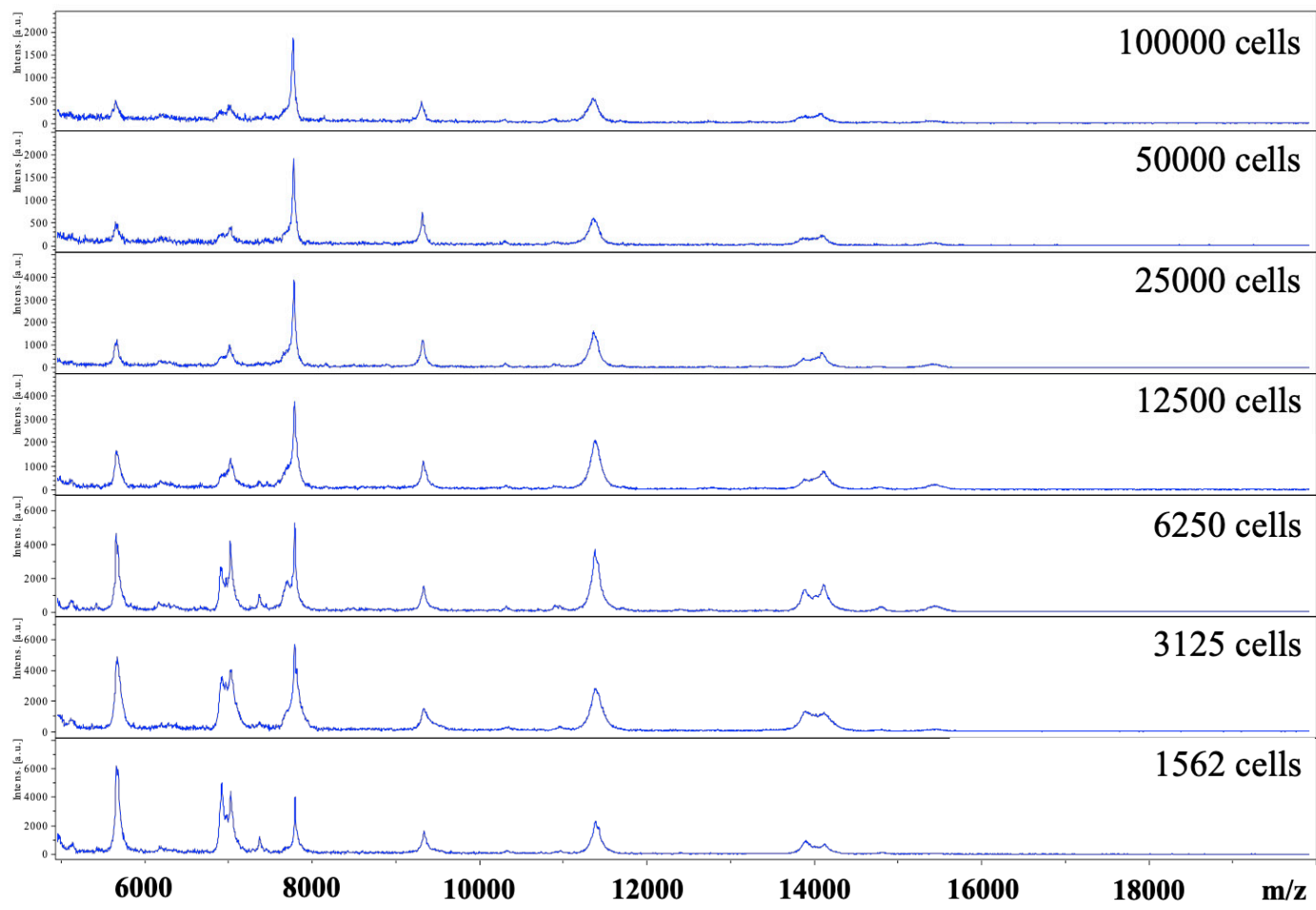
S1B

WBC pattern



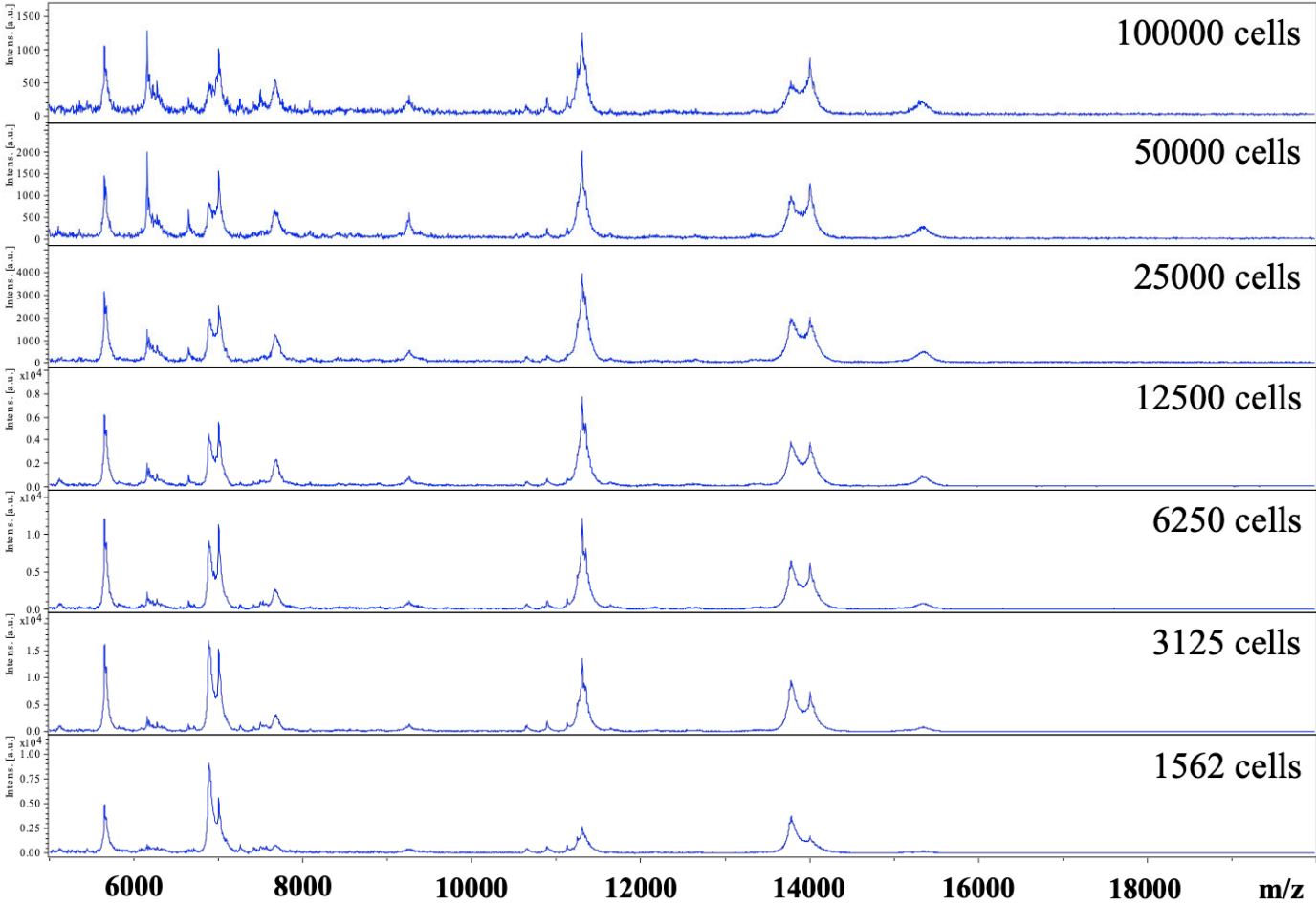
S1C

PBMC pattern



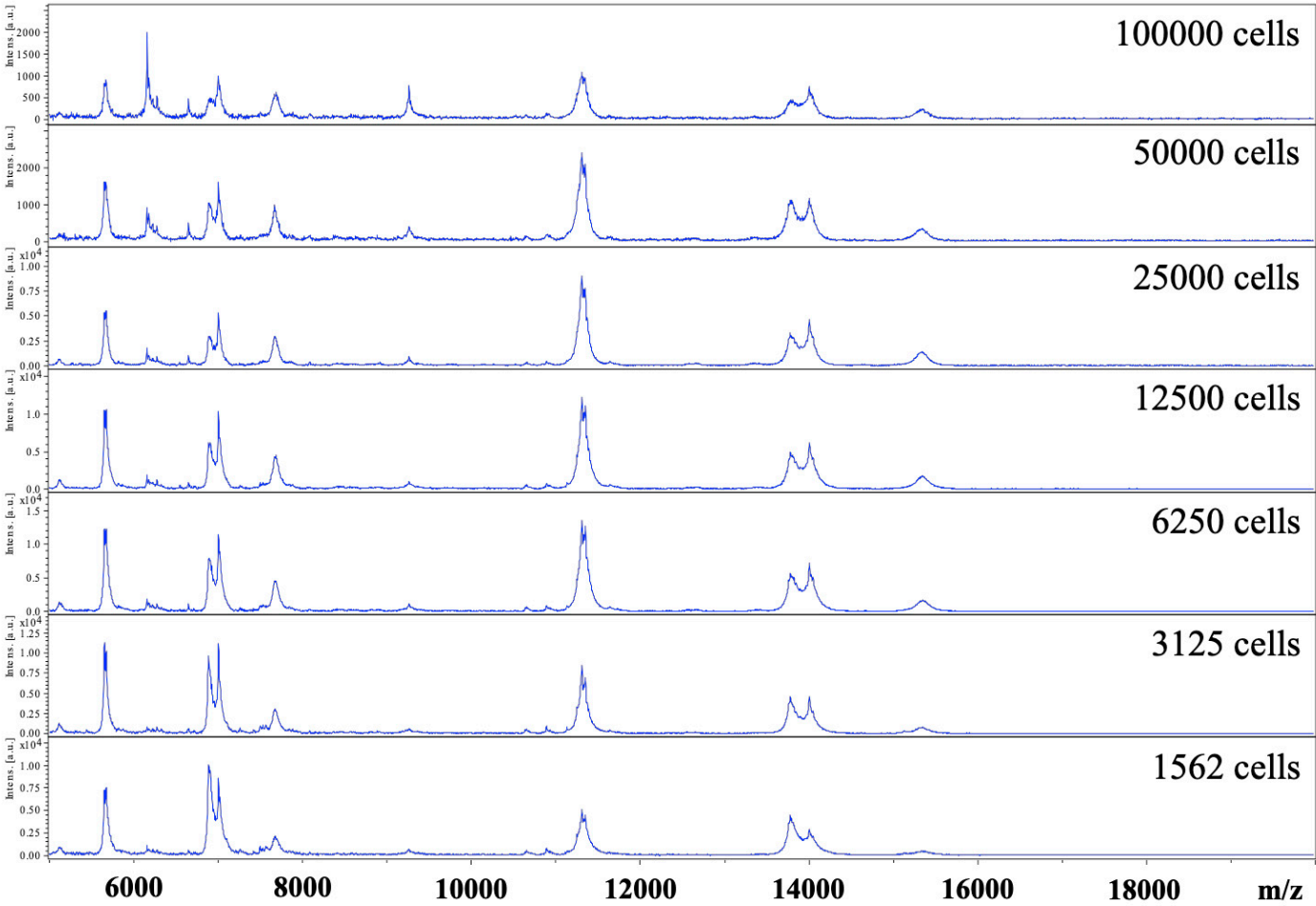
S1D

PHA activated T cell pattern



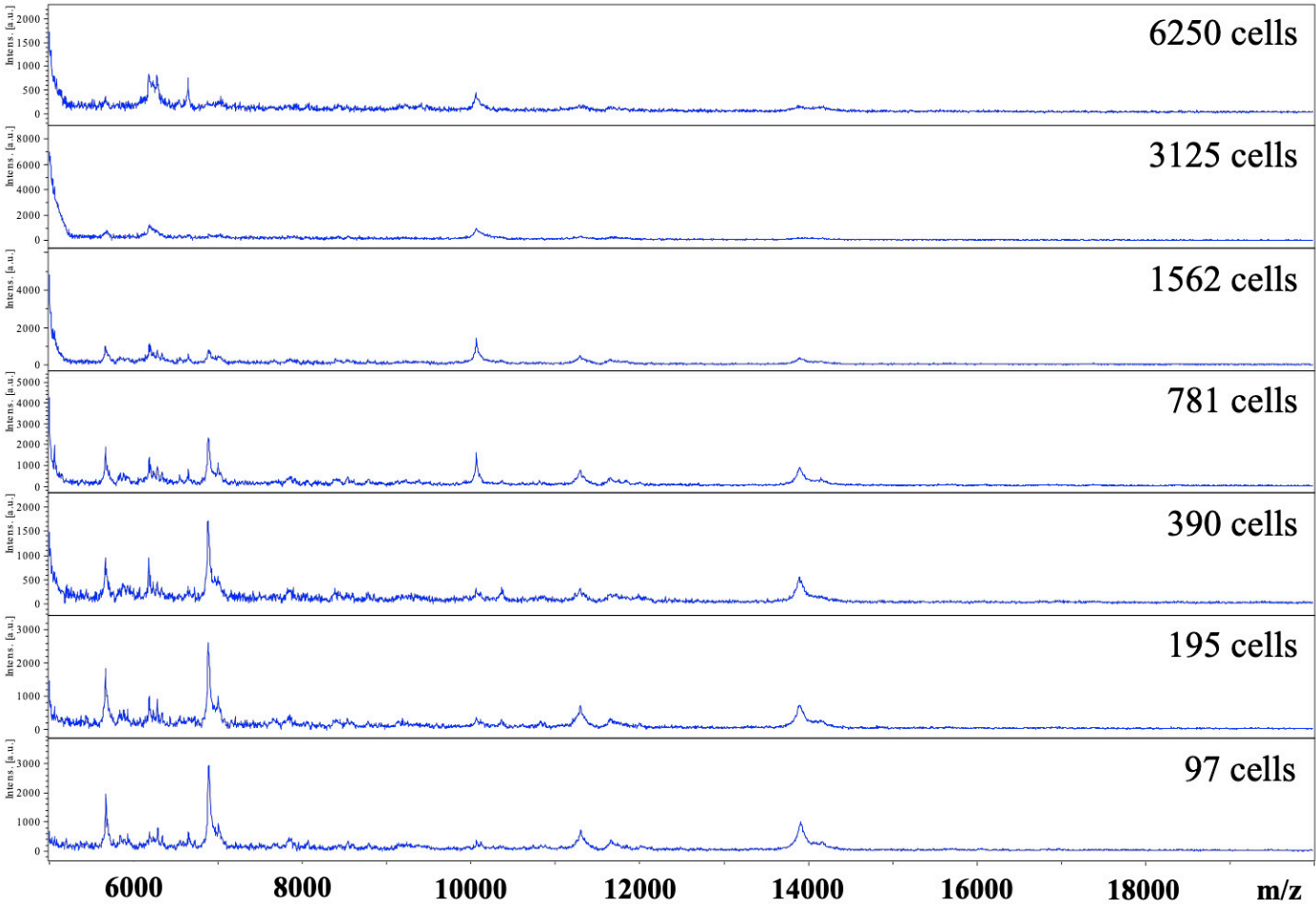
S1E

OKT3/CD28 T cell blast pattern



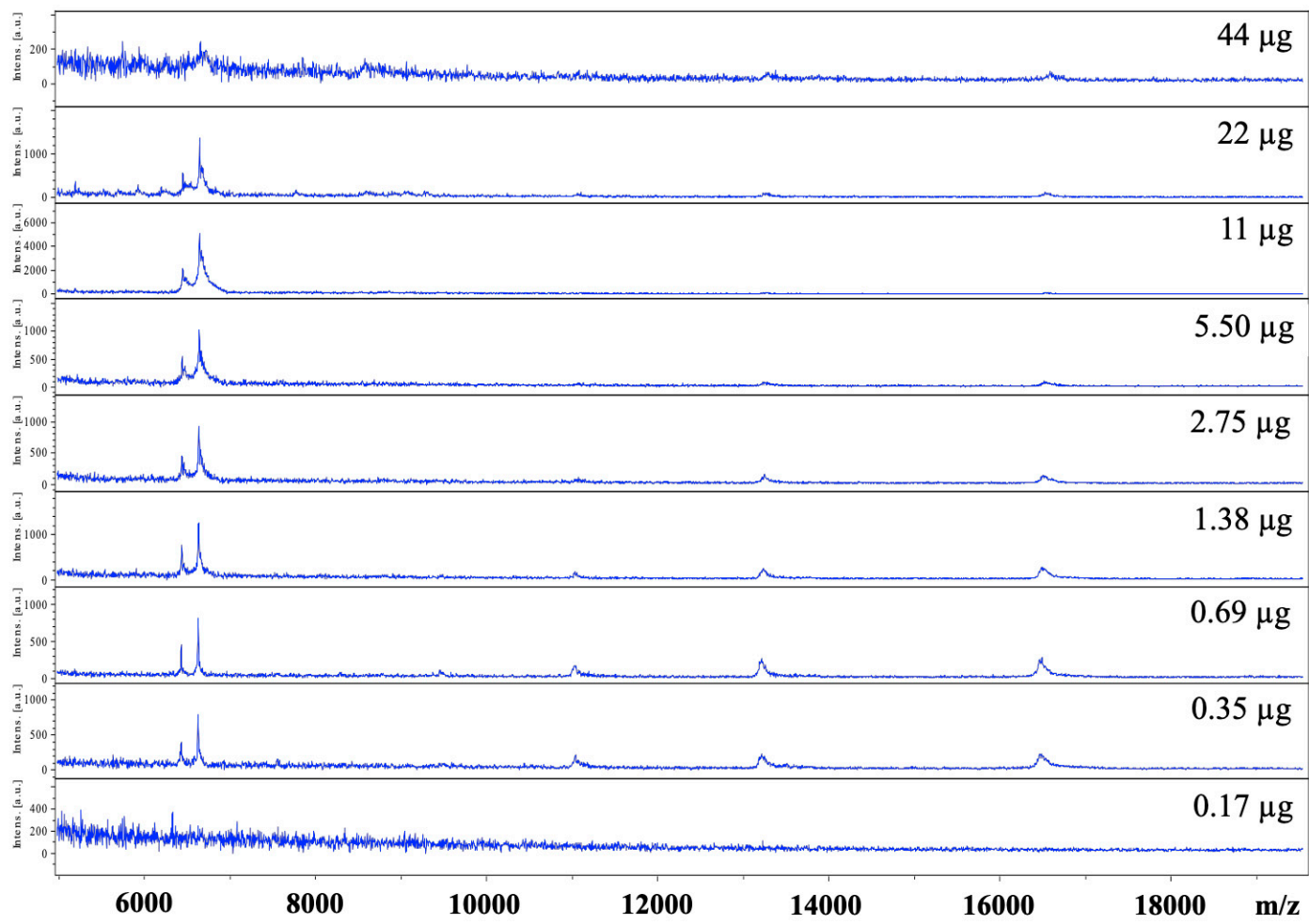
S1F

FHs74Int cell pattern



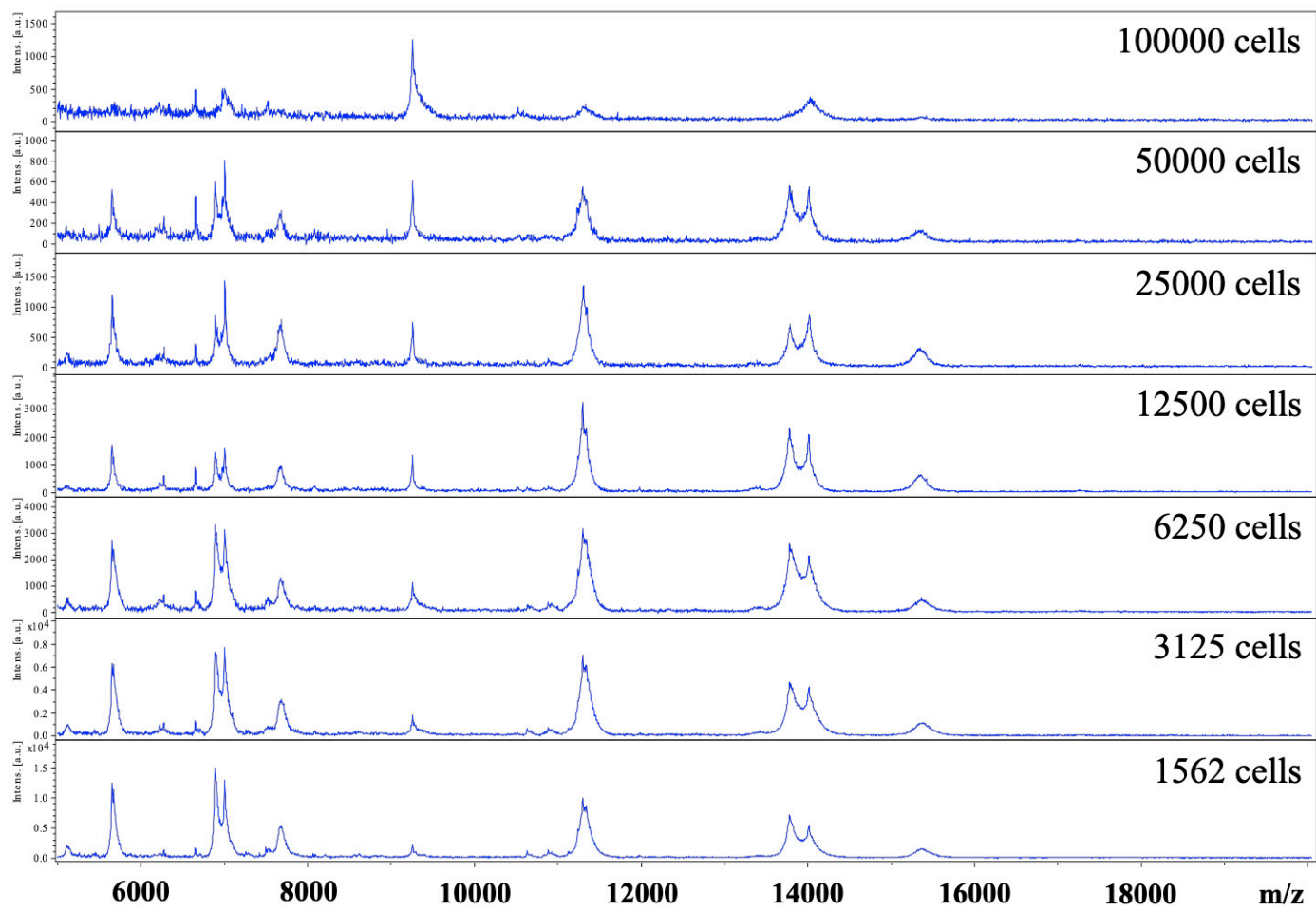
S1G

Plasma pattern



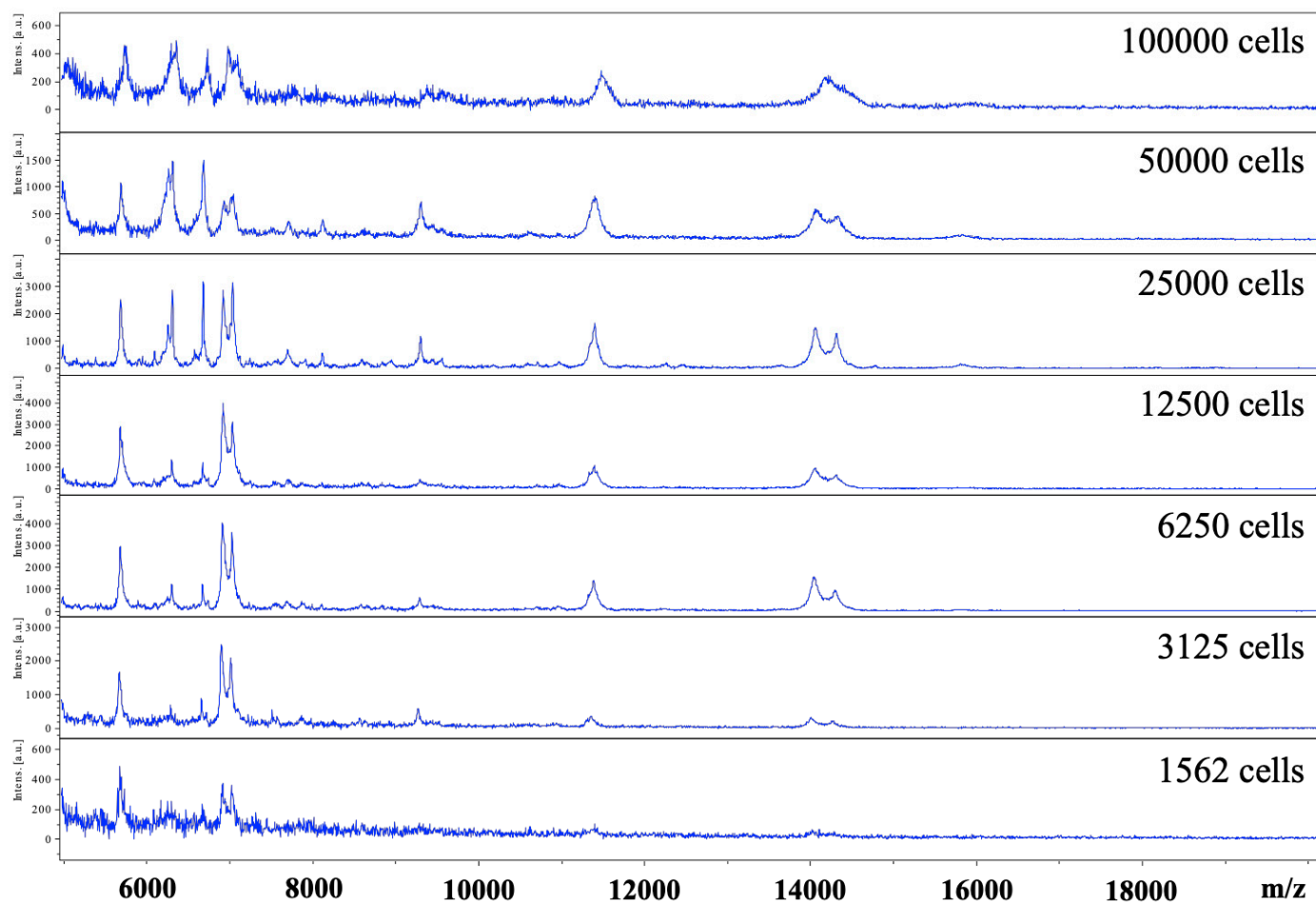
S1H

Jurkat cell pattern



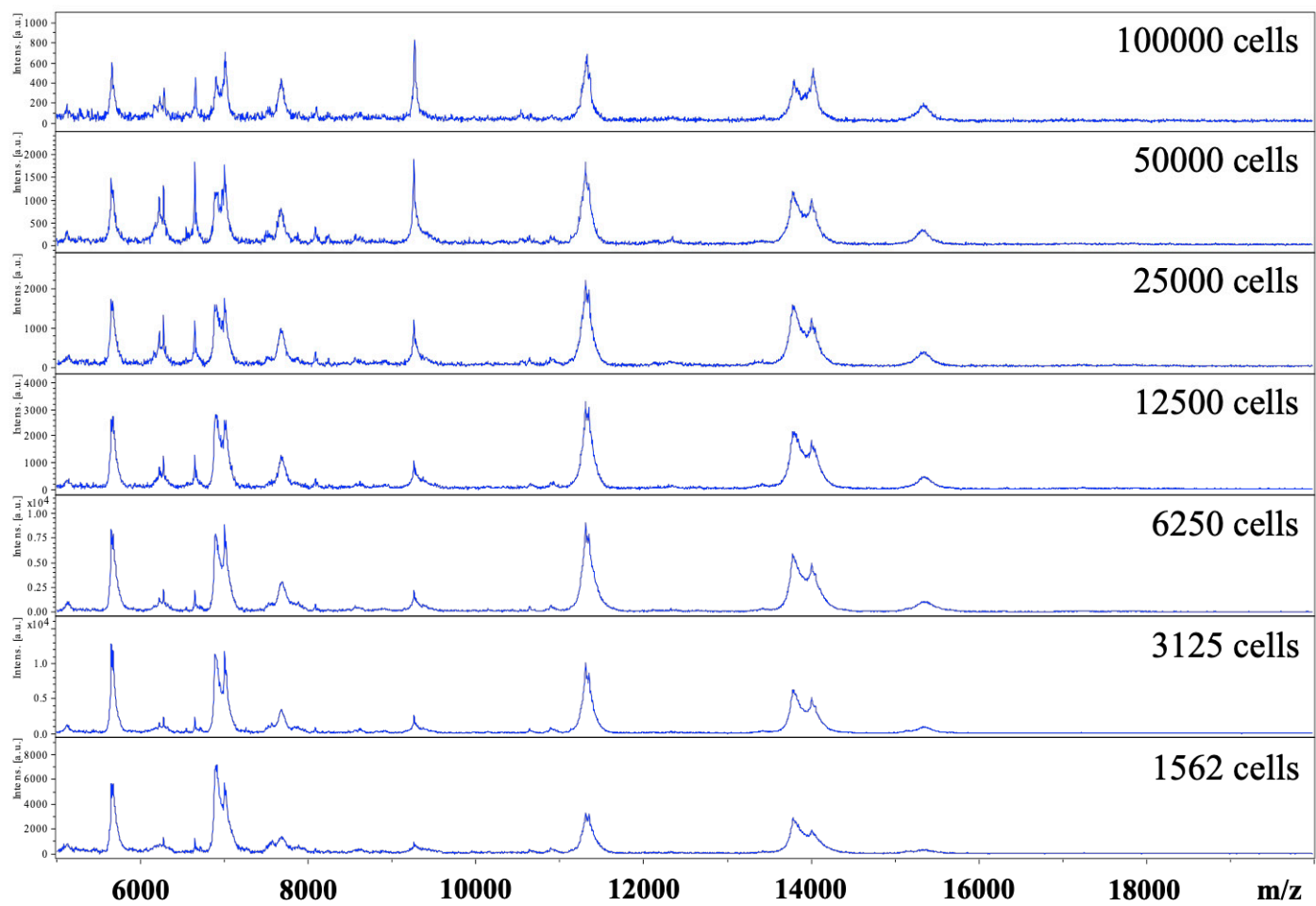
S1I

SK-N-SH cell pattern



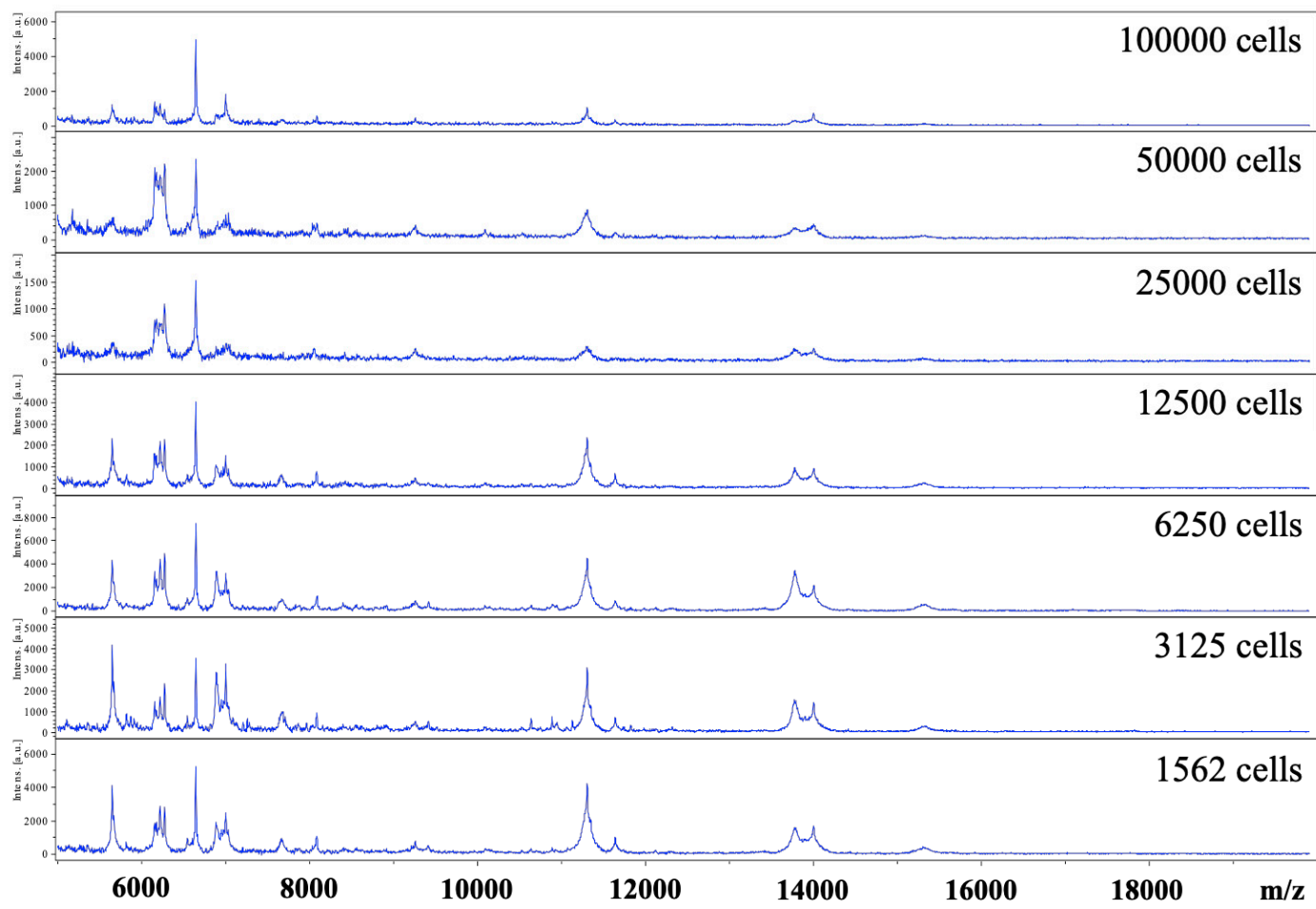
S1J

SH-SY5Y cell pattern



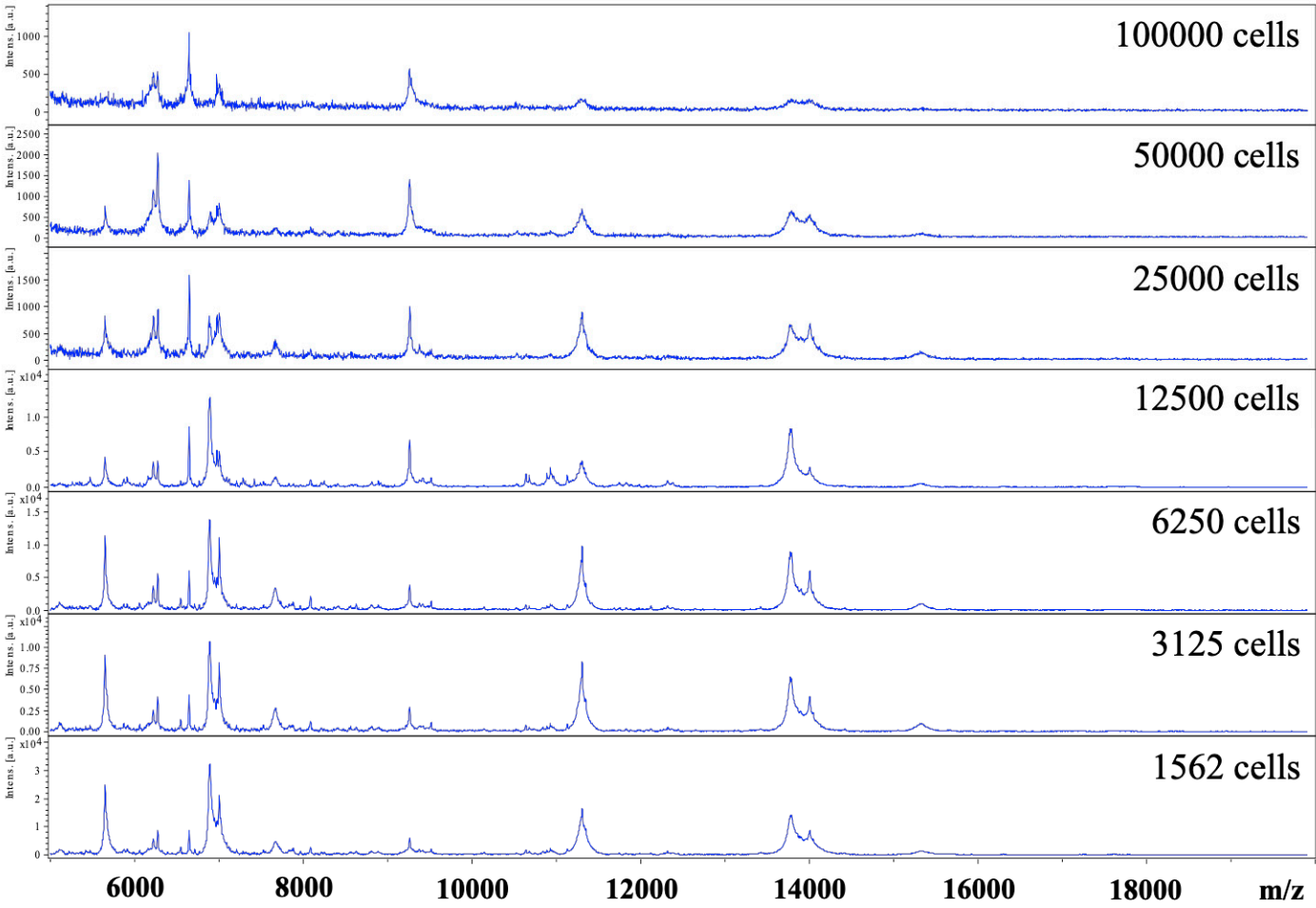
S1K

A549 cell pattern



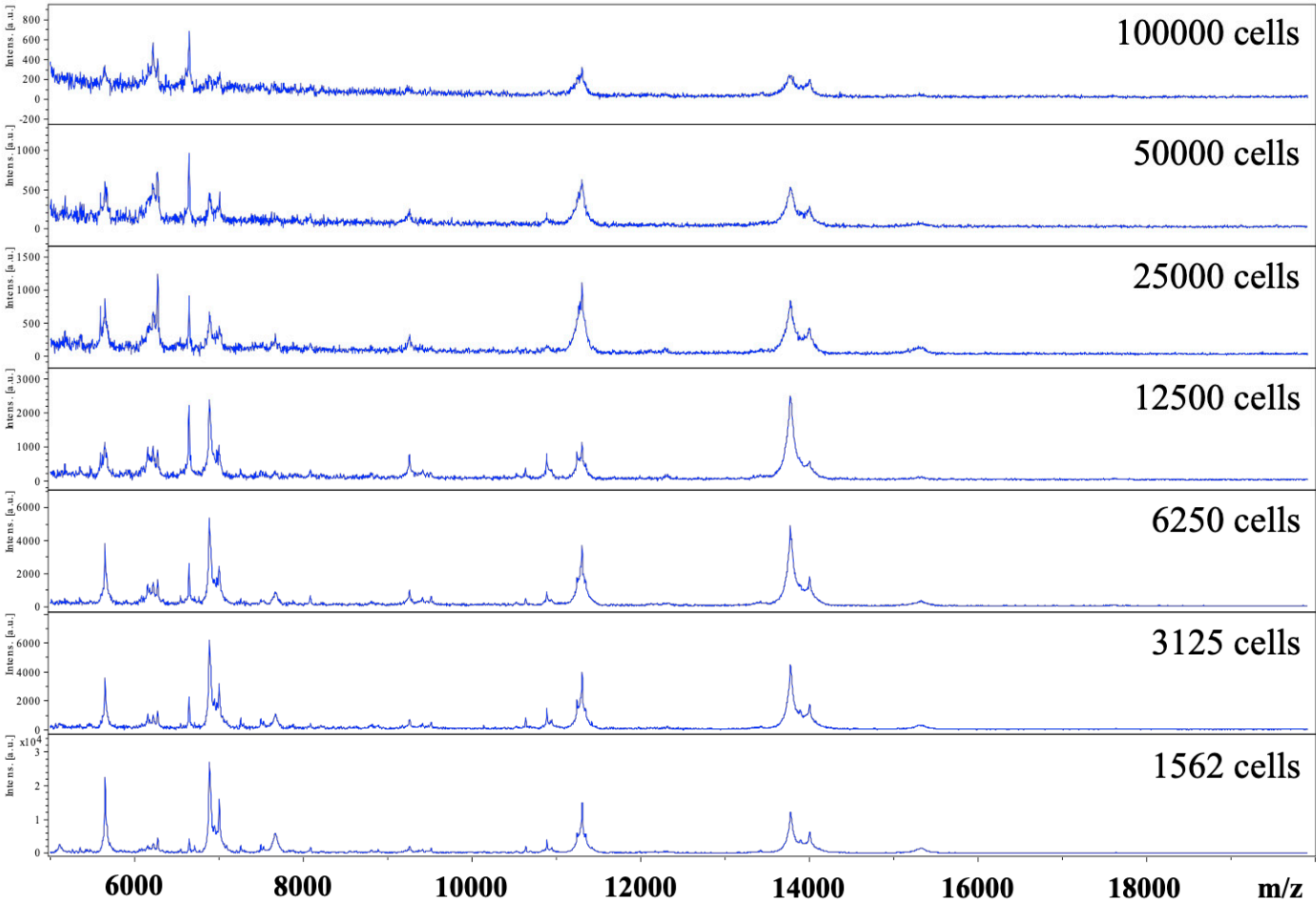
S1L

A2780 cell pattern



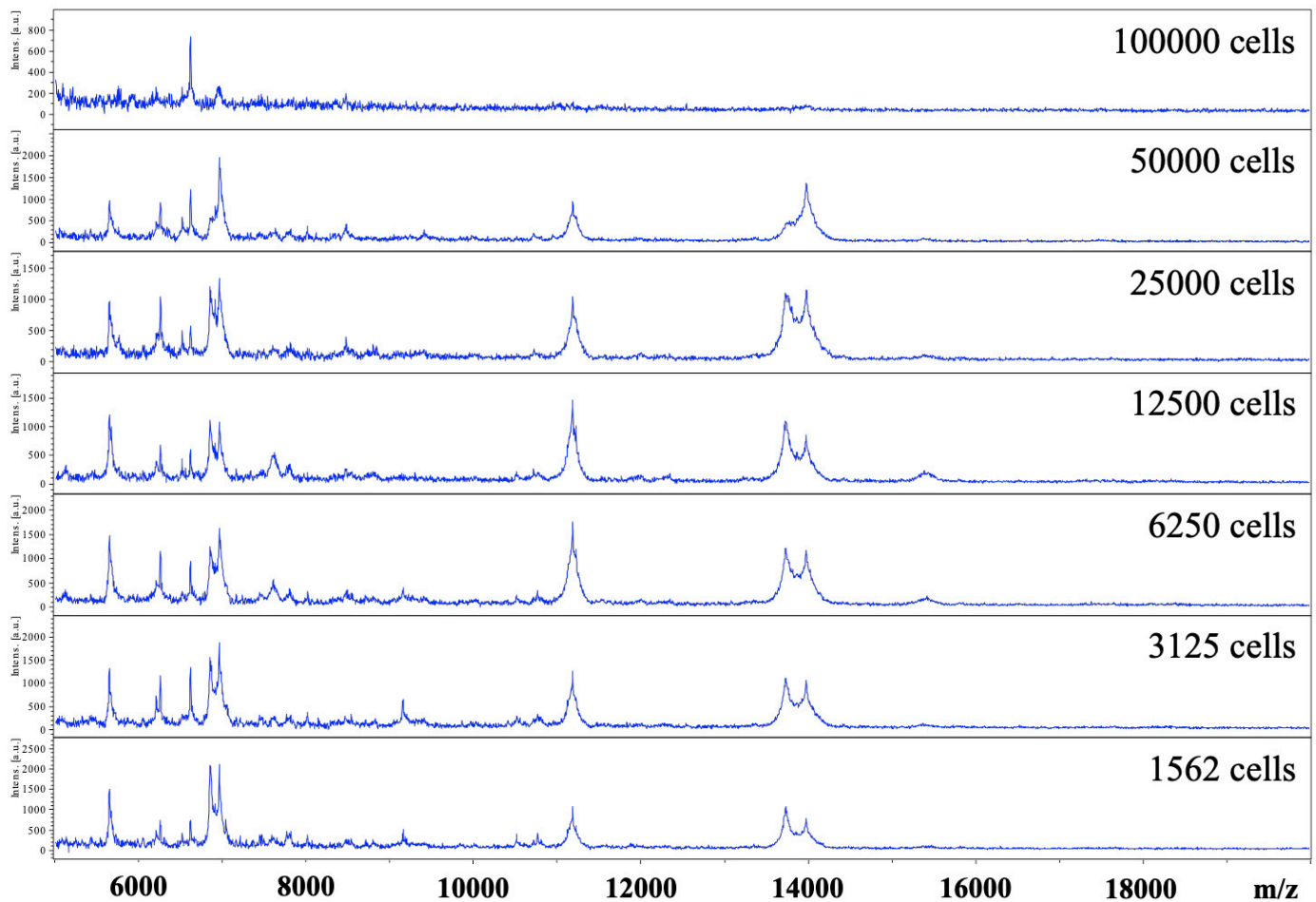
S1M

LNCaP cell pattern



S1N

Caco-2 cell pattern



**Figure S1.** Whole-cell-MSP of normal and cancer cells at various cell dosages. (A) RBC; (B) WBC; (C) PBMC; (D) PHA activated T cell; (E) OKT/CD28 T cell blast; (F) FHs74Int; (G) plasma; (H) Jurkat; (I) SK-N-SH; (J) SH-SY5Y; (K) A549; (L) A2780; (M) LNCaP; (N) Caco-2.

**Table S1.** Culture medium for human cell lines in this study.

Name	Tissue	Disease	Culture medium
FHs74Int	Small intestine	Normal	Hybri-Care Medium ATCC 46-X + 90% of 30 ng/mL EGF + 10%FBS
A2780	Ovary	Carcinoma	RPMI-1640+2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
A549	Lung	Carcinoma	DMEM/HAM'S F-12 + 2 mM·L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
Caco-2	Colon	Colorectal adenocarcinoma	DMEM + 2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
Jurkat	Peripheral blood	Acute T cell leukemia	RPMI-1640 + 2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
LNCaP	Prostate	Carcinoma	RPMI-1640 + 2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
SK-N-SH	Brain	Neuroblastoma	DMEM (1g/L glucose) + 2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin
SH-SY5Y	Bone marrow	Neuroblastoma	DMEM (4.5g/L glucose) + 2 mM L-glutamine + 10% FBS + 1× Penicillin/Streptomycin

**Table S2.** The mass-to-charge (m/z), intensity, and frequency of main spectrum peaks of normal and cancer cell conditions. Blue, normal conditions. Red, cancer cell conditions.

m/z	Normal		Cancer	
	Intensity	Frequency	Intensity	Frequency
5043.18	15.46	71.7		
5075.46	14.15	66.9		
5093.74	11.08	54.6		
5114.2	10.49	63.3		
5145.94	9.33	49	10.6	60.8
5173.37			10.72	47.6
5183.48	19.18	71.3		
5206.91	12.32	62.9		
5225.35	11.45	48.6	10.11	55.4
5259.13	11.02	45.8		
5313.19	10.63	52.2		
5355.09	13.97	67.7	12.9	83.7
5376.39	11.86	66.9		
5415.29	13.94	57.4		
5421.98			13.31	69.9
5472.78	10.26	49.4		
5585.21	9.91	45.4		
5603.39	11.23	45.4	9.02	51.8
5618.3	13.43	60.2		
5636.54	19.77	49	16.33	92.2
5653.22	57.01	83.7	65.01	92.8
5674.85	37.47	86.1	34.95	100
5691.52	26.22	70.5	17.11	89.2
5707.47			12.51	72.3
5720.72	18.07	69.3	10.27	60.2
5737.01	14.52	58.2		
5755.91	11.04	49.4		
5783.34	10.15	43.4		
5810.49	12.79	50.6		
5830.47	13.07	72.1		
5921.75	13.01	69.3		
5992.05			9.26	60.8
6061.32	11.22	47	8.95	51.8
6159.65	15.64	86.1	12.11	58.4
6177.59	27.36	67.3	20.15	67.5
6195.73	16.91	75.3		
6226.3	24.86	76.9	17.08	90.4
6244.58			15.69	62
6261.99			22.16	57.2
6276.44	39.69	78.9	34.68	83.7
6293.13			12.33	74.7
6298.54	15.63	58.2		
6330.95	12.58	53.4	20.87	66.9
6358.1			26.87	56
6364.12	11.38	54.6		
6383.02			18.26	49.4
6512.09	11.56	46.2	14.75	48.2
6545.47	18.08	58.6	12.26	86.1
6567.28	12.2	49.4		
6591.88	11.24	48.6		
6628.67	23.19	45.4		
6641.78			22.63	67.5
6647.14	38.25	77.3	57.72	51.8
6670.24	20.03	65.7	15.07	81.9

6692.58	12.44	59.4	9.99	57.2
6713.84			8.7	75.3
6728.11	13.14	44.6		
6889.69	30.06	80.1	51.51	95.2
6910.13	21.26	72.5	34.41	84.5
6926.03	24.62	50.6	21.12	71.1
6950.18	13.67	58.2	17.67	89.8
6976.7	13.53	45.8		
6980.44			20.78	95.8
7007.11	25.35	72.9	62.86	98.2
7021.48			33.05	95.2
7036.64	19.17	69.7	21.16	77.7
7057.62	12.95	51.8	12.41	48.2
7080.54	11.49	45.8		
7258.59			8.56	56.6
7527.42			7.09	51.8
7558.62	24.99	50.6		
7624.56			8.18	47
7637.38	11.22	48.2		
7647.25			10.72	63.3
7659.63	10.88	54.6		
7668.73			15.43	48.8
7678.22	11.73	49.4	13.68	75.9
7703.24	10.42	48.6		
7709.9			8.82	49.4
7835.01	10.24	55		
7882.78	12.27	61	8.35	59
7930.28	10.68	45.8		
8087.14	17.18	54.6	12.24	68.7
8558.19			17.45	69.3
8583.8			13.68	47.6
9263.08			28.25	57.8
10844.09			12.01	55.4
10877.55			7.37	54.2
11247.02			15.47	66.9
11268.14	19.6	55.4	19.31	87.3
11289.64	25.21	71.3		
11307.18	44.01	61.4	42.46	93.4
11328.46	29	59.8	25.44	59.6
11348.59	27.72	66.1	27.14	78.9
11366.75			16.37	47.6
11371.86	22.84	53.4		
11383.36			11.76	72.9
13744.32			18.58	61.4
13783.64			28.72	93.4
13788.19			28.63	66.9
13817.97			19.32	68.7
13852.6			13.67	53.6
13908.11			9.88	56
13988.19			23.46	80.7
14014.15			30.39	85.5
14053.31			16.18	74.1