

Table S1. RNA sequencing data of adhesion and suspension cells used in this study from Gene Expression Omnibus (GEO)

		Analyzed_Samples					
Group	Data Source	Accession	Sample (paired ended/single ended)	Labeling	Biosample Type	Cell line	Origin
Adhesion	GEO	GSM958749	ENCF000DKT	ENCF000DKZ	A1	Cell line	HCT116
Adhesion	GEO	GSM958749	ENCF000DKU	ENCF000DLA	A2	Cell line	HCT116
Adhesion	GEO	GSM958749	ENCF000DKV	ENCF000DLB	A3	Cell line	HCT116
Adhesion	GEO	GSM958744	ENCF000DRT	ENCF000DRX	A4	Primary Cell	Skeletal muscle myoblast
Adhesion	GEO	GSM958745	ENCF000DEG	ENCF000EBN	A5	Cell line	Breast Adenocarcinoma
Adhesion	GEO	GSE78585	ENCF000EJF	ENCF000EJA	A6	Cell line	Lung fibroblast
Adhesion	GEO	GSE78606	ENCF000GBO	ENCF000GBU	A7	Primary Cell	Hair follicle dermal papilla cell
Adhesion	GEO	GSE78616	ENCF000GEQ	ENCF000GET	A8	Primary Cell	Mammary epithelial cell
Adhesion	GEO	GSE90273	ENCF000GGZ	ENCF000GHA	A9	Primary Cell	Mesenchymal stem cell of the bone marrow
Adhesion	GEO	GSE78608	ENCF000GKC	ENCF000GNF	A10	Primary Cell	Osteoblast
Adhesion	GEO	GSE78604	ENCF000GHZ	ENCF000GJH	A11	Primary Cell	Placental Pericyte
Adhesion	GEO	GSE78609	ENCF000GNB	ENCF000GNG	A12	Primary Cell	Endothelial cell
Adhesion	GEO	GSE78588	ENCF000GSA	ENCF000GTA	A13	Primary Cell	Endothelial cell of umbilical vein
Adhesion	GEO	GSE78615	ENCF000GYE	ENCF000GYW	A14	Primary Cell	Subcutaneous white pre-adipocyte
Adhesion	GEO	GSE90227	ENCF000HAZ	ENCF000HBG	A15	Cell line	IMR-90
Adhesion	GEO	GSE78611	ENCF000ILQ	ENCF000ILS	A16	Primary Cell	Lung fibroblast
Adhesion	GEO	GSE78536	ENCF001QZF	ENCF001QZG	A18	Primary Cell	Skeletal muscle myosatellite cells
Adhesion	GEO	GSE78539	ENCF001QZH	ENCF001QZI	A19	Primary Cell	Dermis blood vessel endothelial cell
Adhesion	GEO	GSE78546	ENCF001QZL	ENCF001QZM	A20	Primary Cell	Nasal cavity respiratory epithelium epithelial cell
Adhesion	GEO	GSE78528	ENCF001QZP	ENCF001QZQ	A21	Primary Cell	Smooth muscle cell of trachea
Adhesion	GEO	GSE78534	ENCF001QZK	ENCF001QZY	A22	Primary Cell	Aortic smooth muscle cell
Adhesion	GEO	GSE78532	ENCF001RAF	ENCF001RAG	A23	Primary Cell	Smooth muscle cell of the coronary artery
Adhesion	GEO	GSE78529	ENCF001RAH	ENCF001RAJ	A24	Primary Cell	Bronchial smooth muscle cell
Adhesion	GEO	GSE78533	ENCF001RBJ	ENCF001RBK	A25	Primary Cell	Bladder microvascular endothelial cell
Adhesion	GEO	GSE78531	ENCF001RBN	ENCF001RBO	A26	Primary Cell	Endothelial cell of coronary artery
Adhesion	GEO	GSE78548	ENCF001RBX	ENCF001RBY	A27	Primary Cell	Bronchial epithelial cell
Adhesion	GEO	GSE78549	ENCF001RCB	ENCF001RCC	A28	Primary Cell	Smooth muscle cell of the umbilical artery
Adhesion	GEO	GSE78540	ENCF001RCD	ENCF001RCE	A29	Primary Cell	Uterine smooth muscle cell
Adhesion	GEO	GSE78541	ENCF001RDN	ENCF001RDO	A30	Primary Cell	Pulmonary artery endothelial cell
Adhesion	GEO	GSE78540	ENCF000ZBF	ENCF000ZBG	A31	Primary Cell	Smooth muscle cell of the pulmonary artery
Adhesion	GEO	GSE78676	ENCF000ZKO	ENCF000ZKS	A32	Cell line	neural cell originated from H1
Adhesion	GEO	GSE78652	ENCF000ZHT	ENCF000ZHU	A33	Cell line	SJSA1
Adhesion	GEO	GSE78684	ENCF000ZKW	ENCF000ZDLA	A34	Cell line	A375
Adhesion	GEO	GSE78696	ENCF000ZLN	ENCF000ZLO	A35	Cell line	HT-29
Adhesion	GEO	GSE78653	ENCF000ZLP	ENCF000ZLQ	A36	Cell line	M059J
Adhesion	GEO	GSE78643	ENCF000ZLX	ENCF000ZLY	A37	Cell line	Malignant Glioblastoma
Adhesion	GEO	GSE78655	ENCF000ZMB	ENCF000ZMC	A38	Cell line	Fibrosarcoma
Adhesion	GEO	GSE78651	ENCF000ZMU	ENCF000ZMK	A39	Cell line	Malignant melanoma epithelial cell
Adhesion	GEO	GSE78664	ENCF000ZMG	ENCF000ZMH	A40	Cell line	Rhabdomyosarcoma fibroblast
Adhesion	GEO	GSE78657	ENCF000ZMS	ENCF000ZMT	A41	Cell line	SJCRH30
Adhesion	GEO	GSE78647	ENCF000ZUJ	ENCF000ZVJ	A42	Primary Cell	H7
Adhesion	GEO	GSE78680	ENCF000ZHPJ	ENCF000ZHTO	A43	Primary Cell	SK-MEL-5
Adhesion	GEO	GSE78677	ENCF000ZKV	ENCF000ZLJ	A44	Primary Cell	A172
Adhesion	GEO	GSM112817	ENCF000ZMT	ENCF000ZNU	A45	Primary Cell	Kidney epithelial cell
Adhesion	GEO	GSE78695	ENCF000ZOD	ENCF000ZOU	A46	Primary Cell	Endometrial microvascular endothelial cells
Adhesion	GEO	GSE78648	ENCF000ZUJ	ENCF000ZVJ	A47	Cell line	myocyte originated from LHCN-M2
Adhesion	GEO	GSE78617	ENCF000ZUJ	ENCF000ZVJ	A48	Primary Cell	ectodermal cell originated from HUES4
Adhesion	GEO	GSM15323	ENCF000ZUJ	ENCF000ZVJ	A49	Primary Cell	M263
Adhesion	GEO	GSE78649	ENCF000ZUJ	ENCF000ZVJ	A50	Primary Cell	PC-3
Adhesion	GEO	GSM15328	ENCF000ZUJ	ENCF000ZVJ	A51	Primary Cell	cardiac muscle cell originated from RUES2
Adhesion	GEO	GSE78681	ENCF000ZUJ	ENCF000ZVJ	A52	Cell line	mesenchymal stem cell originated from H1
Adhesion	GEO	GSE78679	ENCF000ZUJ	ENCF000ZVJ	A53	Primary Cell	Epithelial cell of proximal tubule
Adhesion	GEO	GSE78652	ENCF000ZUJ	ENCF000ZVJ	A54	Cell line	Human embryonic stem cell line
Adhesion	GEO	GSE78656	ENCF000ZUJ	ENCF000ZVJ	A55	Cell line	Epithelial cell of proximal tubule
Adhesion	GEO	GSE78657	ENCF000ZUJ	ENCF000ZVJ	A56	Primary Cell	Human embryonic stem cell line
Adhesion	GEO	GSE78658	ENCF000ZUJ	ENCF000ZVJ	A57	Cell line	H1
Adhesion	GEO	GSE78659	ENCF000ZUJ	ENCF000ZVJ	A58	Primary Cell	H4
Adhesion	GEO	GSE78660	ENCF000ZUJ	ENCF000ZVJ	A59	Primary Cell	hepatocyte originated from H9
Adhesion	GEO	GSE78661	ENCF000ZUJ	ENCF000ZVJ	A60	Primary Cell	hepatocyte originated from H9
Adhesion	GEO	GSE78662	ENCF000ZUJ	ENCF000ZVJ	A61	Primary Cell	G401
Adhesion	GEO	GSE78663	ENCF000ZUJ	ENCF000ZVJ	A62	Primary Cell	HepG2
Adhesion	GEO	GSE78664	ENCF000ZUJ	ENCF000ZVJ	A63	Primary Cell	Cardiac atrium fibroblast
Adhesion	GEO	GSE78665	ENCF000ZUJ	ENCF000ZVJ	A64	Primary Cell	Lung carcinoma epithelial cell
Adhesion	GEO	GSE78666	ENCF000ZUJ	ENCF000ZVJ	A65	Primary Cell	Bronchus fibroblast of lung
Adhesion	GEO	GSE78667	ENCF000ZUJ	ENCF000ZVJ	A66	Primary Cell	Kidney clear cell carcinoma epithelial cell
Adhesion	GEO	GSM112818	ENCF000ZUJ	ENCF000ZVJ	A67	Primary Cell	Cak2
Adhesion	GEO	GSE78644	ENCF000ZUJ	ENCF000ZVJ	A68	Primary Cell	ectodermal cell originated from HUES4
Adhesion	GEO	GSE91305	ENCF000ZUJ	ENCF000ZVJ	A69	Primary Cell	Renal cortical epithelial cell
Adhesion	GEO	GSE98362	ENCF000ZUJ	ENCF000ZVJ	A70	Primary Cell	Lung carcinoma epithelial cell
Adhesion	GEO	GSM438363	ENCF000ZUJ	ENCF000ZVJ	A71	Primary Cell	HepG2
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A72	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A73	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A74	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A75	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A76	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A77	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A78	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A79	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A80	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A81	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A82	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A83	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A84	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A85	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A86	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A87	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A88	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A89	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A90	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A91	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A92	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A93	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A94	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A95	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A96	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A97	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A98	Primary Cell	IMR-90
Adhesion	GEO	GSE88131	ENCF000ZUJ	ENCF000ZVJ	A99	Primary Cell	IMR-90
Suspension	GEO	GSE90268	ENCF000ESQ	ENCF000ESV	S1	Primary Cell	B cell
Suspension	GEO	GSE90268	ENCF000ESQ	ENCF000ESW	S2	Primary Cell	B cell
Suspension	GEO	GSE90268	ENCF000ESQ	ENCF000ESX	S3	Primary Cell	B cell
Suspension	GEO	GSE78605	ENCF000EUR	ENCF000EUS	S4	Primary Cell	Hematopoietic multipotent progenitor
Suspension	GEO	GSE90272	ENCF000HUU	ENCF000HVA	S5	Primary Cell	CD14-positive monocyte
Suspension	GEO	GSE90272	ENCF000HUV	ENCF000HVB	S6	Primary Cell	CD14-positive monocyte
Suspension	GEO	GSE90272	ENCF000HUV	ENCF000HVC	S7	Primary Cell	CD14-positive monocyte
Suspension	GEO	GSE78558	ENCF001RCT	ENCF001RDB	S8	Cell line	K562
Suspension	GEO	GSE78621	ENCF000ZDLR	ENCF000ZDLS	S9	Cell line	OCL-LY7
Suspension	GEO	GSE78642	ENCF000ZDLT	ENCF000ZDLU	S10	Cell line	Karpas-422
Suspension	GEO	GSM1060237	ENCF000ZDLU	ENCF000ZDLV	S11	Primary Cell	B cell lymphoma
Suspension	GEO	GSM1060238	ENCF000ZDLU	ENCF000ZDLW	S12	Primary Cell	B cell non-hodgkin lymphoma
Suspension	GEO	GSM1060239	ENCF000ZDLU	ENCF000ZDLX	S13	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060240	ENCF000ZDLU	ENCF000ZDLY	S14	Primary Cell	B cell CD8-positive, alpha-beta T cell
Suspension	GEO	GSM1060241	ENCF000ZDLU	ENCF000ZDLZ	S15	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060242	ENCF000ZDLU	ENCF000ZDLA	S16	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060243	ENCF000ZDLU	ENCF000ZDLB	S17	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060244	ENCF000ZDLU	ENCF000ZDLC	S18	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060245	ENCF000ZDLU	ENCF000ZDLD	S19	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060246	ENCF000ZDLU	ENCF000ZDLE	S20	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060247	ENCF000ZDLU	ENCF000ZDLF	S21	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060248	ENCF000ZDLU	ENCF000ZDLG	S22	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060249	ENCF000ZDLU	ENCF000ZDLH	S23	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060250	ENCF000ZDLU	ENCF000ZDLI	S24	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060251	ENCF000ZDLU	ENCF000ZDLJ	S25	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060252	ENCF000ZDLU	ENCF000ZDLK	S26	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060253	ENCF000ZDLU	ENCF000ZDLL	S27	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060254	ENCF000ZDLU	ENCF000ZDLM	S28	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060255	ENCF000ZDLU	ENCF000ZDLN	S29	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060256	ENCF000ZDLU	ENCF000ZDL O	S30	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060257	ENCF000ZDLU	ENCF000ZDL P	S31	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060258	ENCF000ZDLU	ENCF000ZDL Q	S32	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060259	ENCF000ZDLU	ENCF000ZDL R	S33	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060260	ENCF000ZDLU	ENCF000ZDL S	S34	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060261	ENCF000ZDLU	ENCF000ZDL T	S35	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060262	ENCF000ZDLU	ENCF000ZDL U	S36	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060263	ENCF000ZDLU	ENCF000ZDL V	S37	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060264	ENCF000ZDLU	ENCF000ZDL W	S38	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060265	ENCF000ZDLU	ENCF000ZDL X	S39	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060266	ENCF000ZDLU	ENCF000ZDL Y	S40	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060267	ENCF000ZDLU	ENCF000ZDL Z	S41	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060268	ENCF000ZDLU	ENCF000ZDL A	S42	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060269	ENCF000ZDLU	ENCF000ZDL B	S43	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060270	ENCF000ZDLU	ENCF000ZDL C	S44	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060271	ENCF000ZDLU	ENCF000ZDL D	S45	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060272	ENCF000ZDLU	ENCF000ZDL E	S46	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060273	ENCF000ZDLU	ENCF000ZDL F	S47	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060274	ENCF000ZDLU	ENCF000ZDL G	S48	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060275	ENCF000ZDLU	ENCF000ZDL H	S49	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060276	ENCF000ZDLU	ENCF000ZDL I	S50	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060277	ENCF000ZDLU	ENCF000ZDL J	S51	Primary Cell	B cell CD4-positive, alpha-beta T cell
Suspension	GEO	GSM1060278	ENCF000Z				