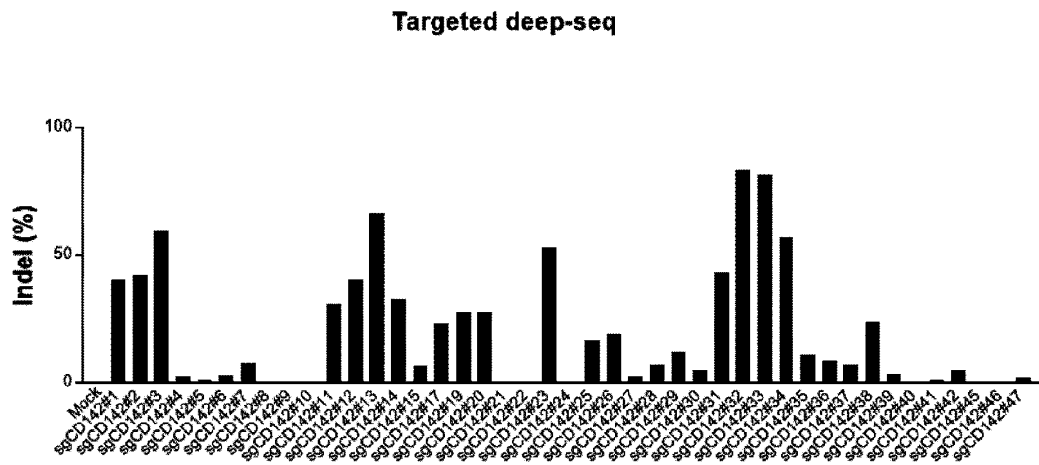
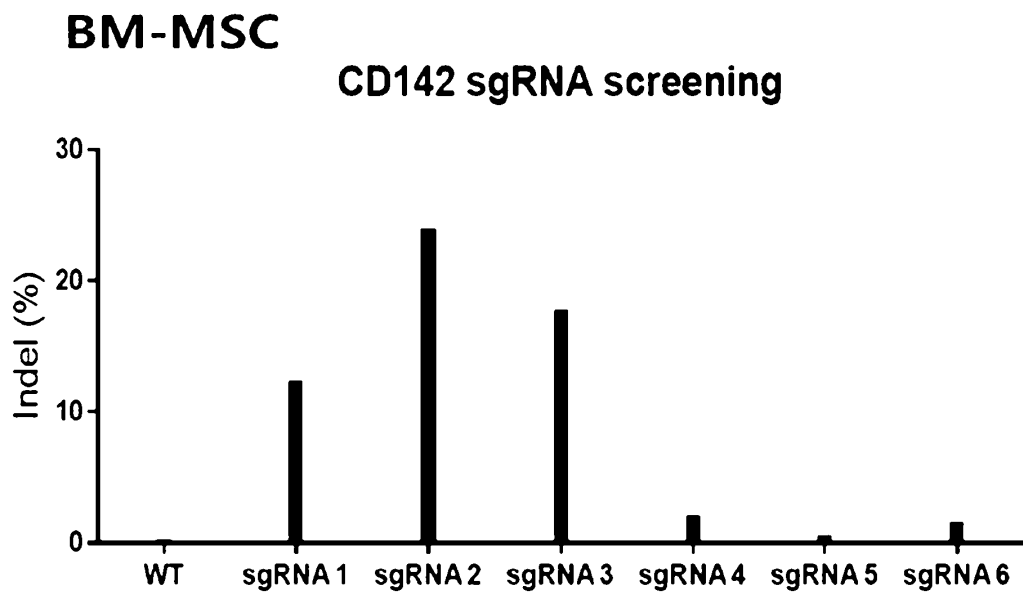


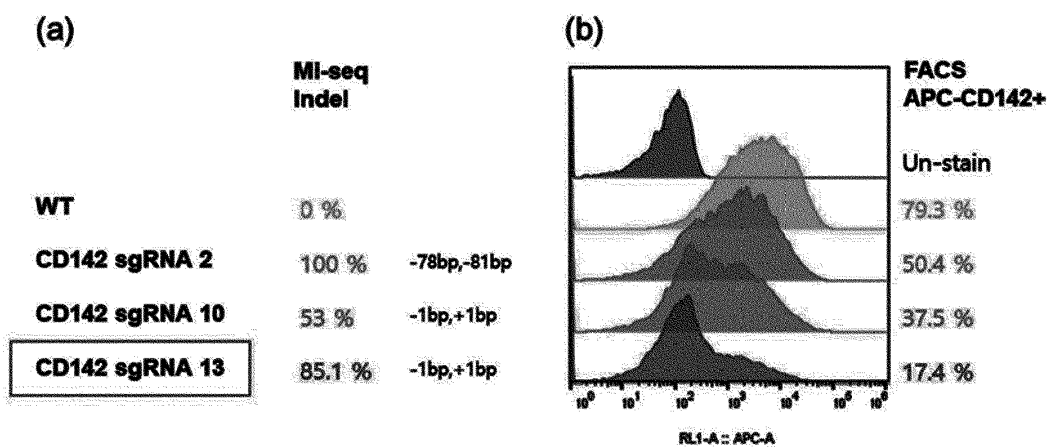
[도1]



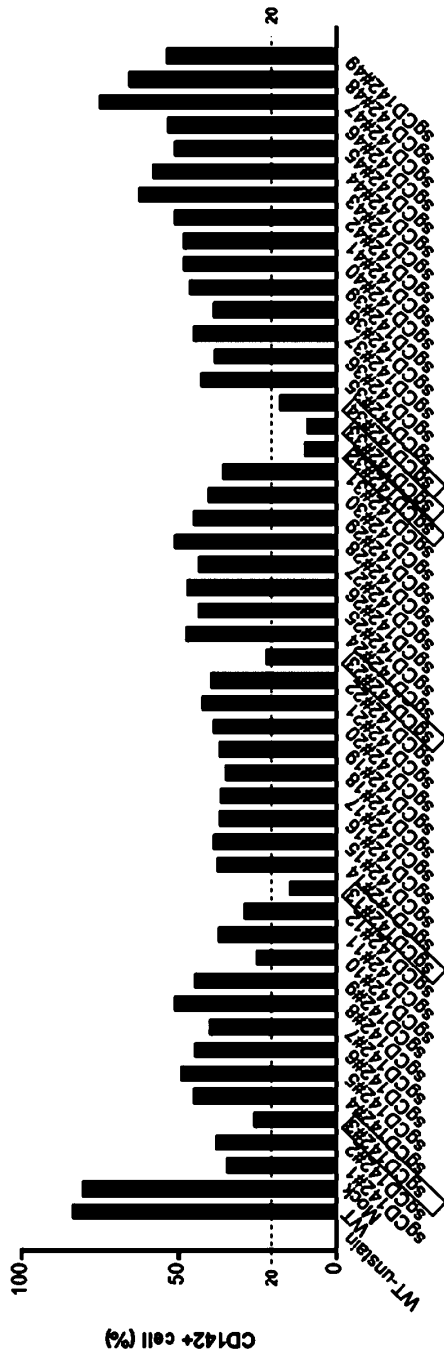
[도2]



[도3]

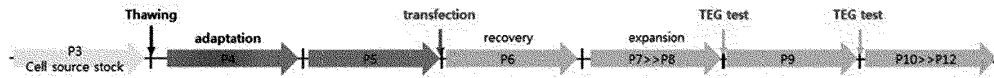


[도4]



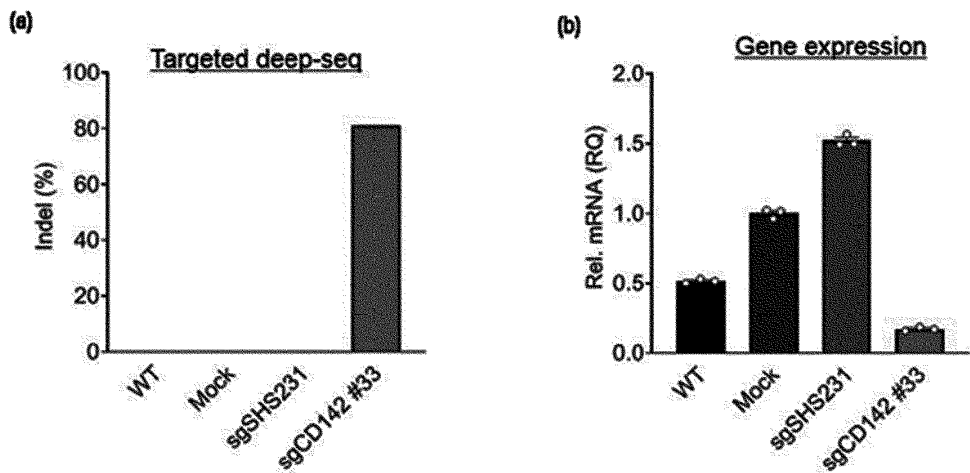
[도5]

• UC-MSC passaging

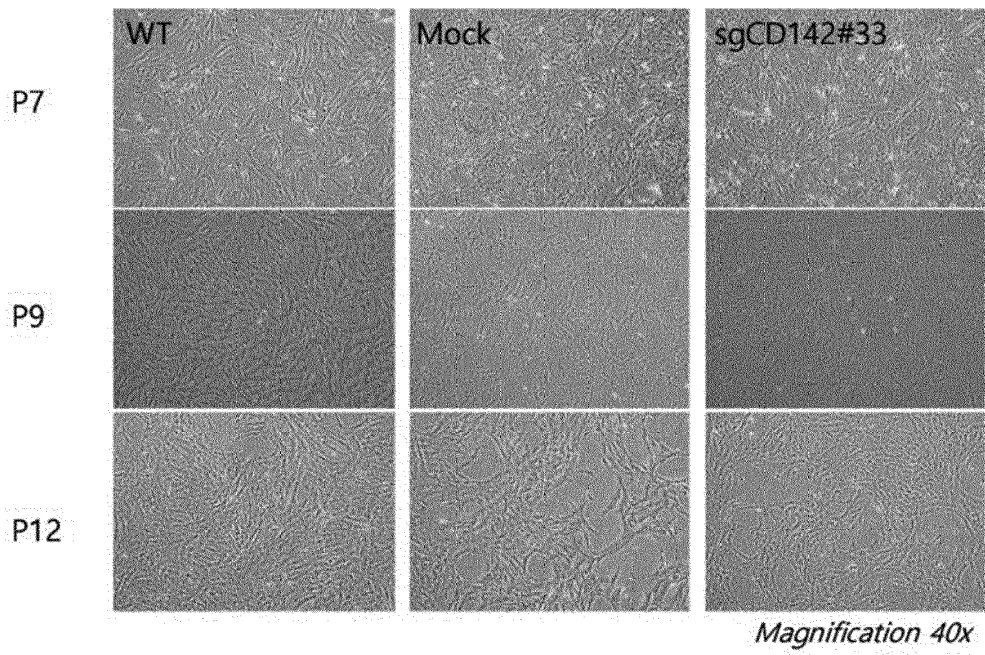


Transfection		Assessment
Label	Info. F3 locus no.	
Mock	Electroporation only	✓ Proliferation check ✓ Flow cytometer ✓ gDNA (2x10⁵ cells /group) for NGS ✓ mRNA (1x10⁶ cells /group) for gene expression ✓ RNAseq(2x10⁵ cells /group) ✓ Cytokine array(FBS free CM, 20m/ group) ✓ TEG assay ✓ TA ELISA (2x10⁵ cells /group)
sgCD142#33	sgCD142#33 + Cas9	
sgSHS231	sgSHS231 (control sgRNA) + Cas9	

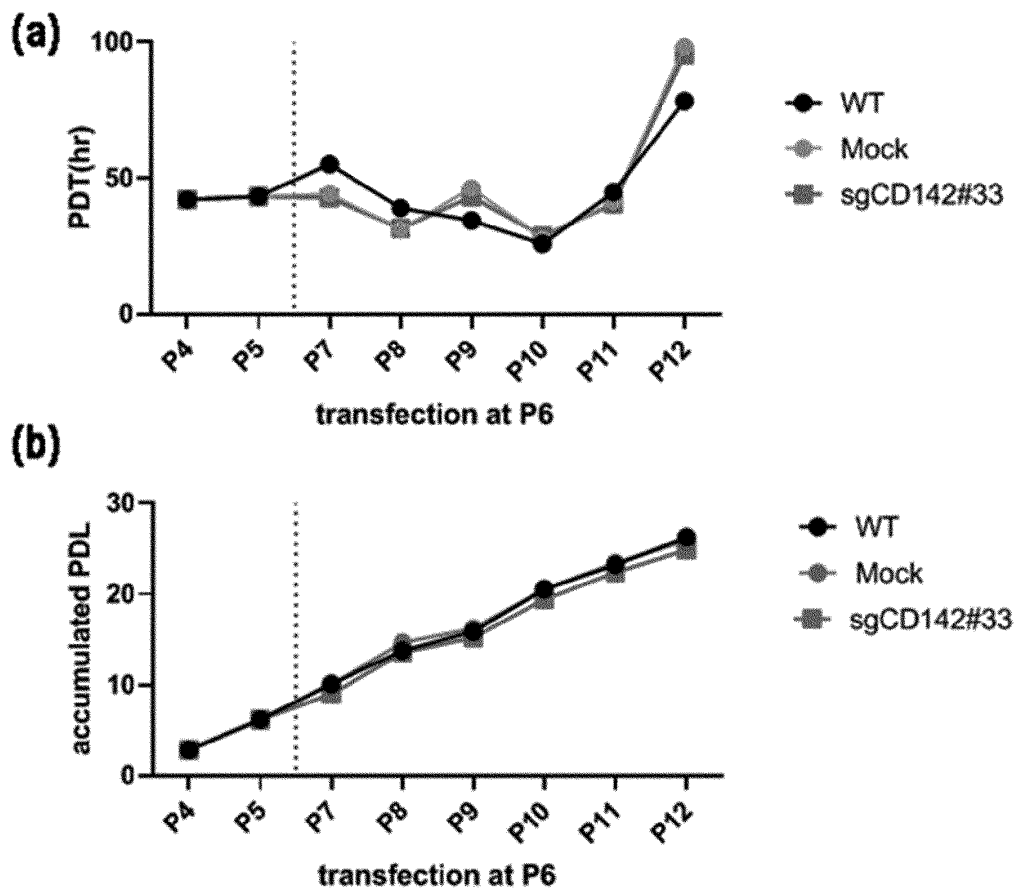
[도6]



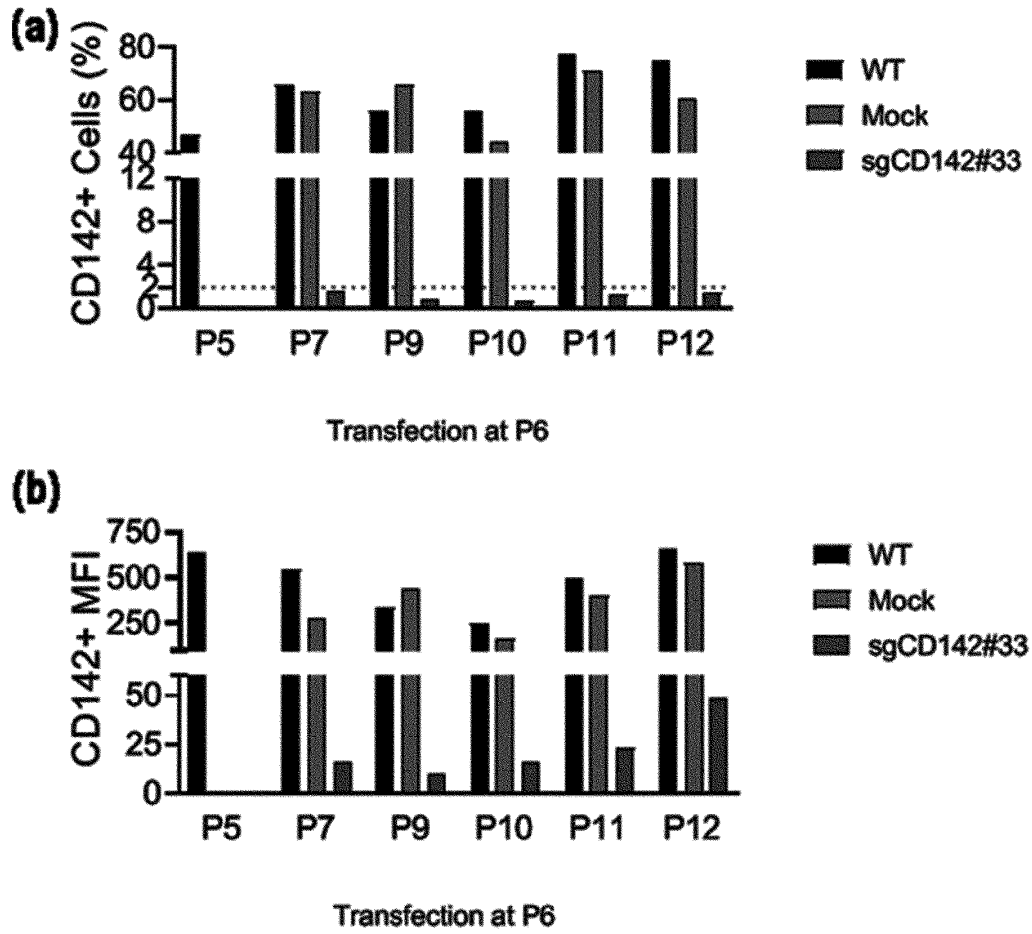
[도7]



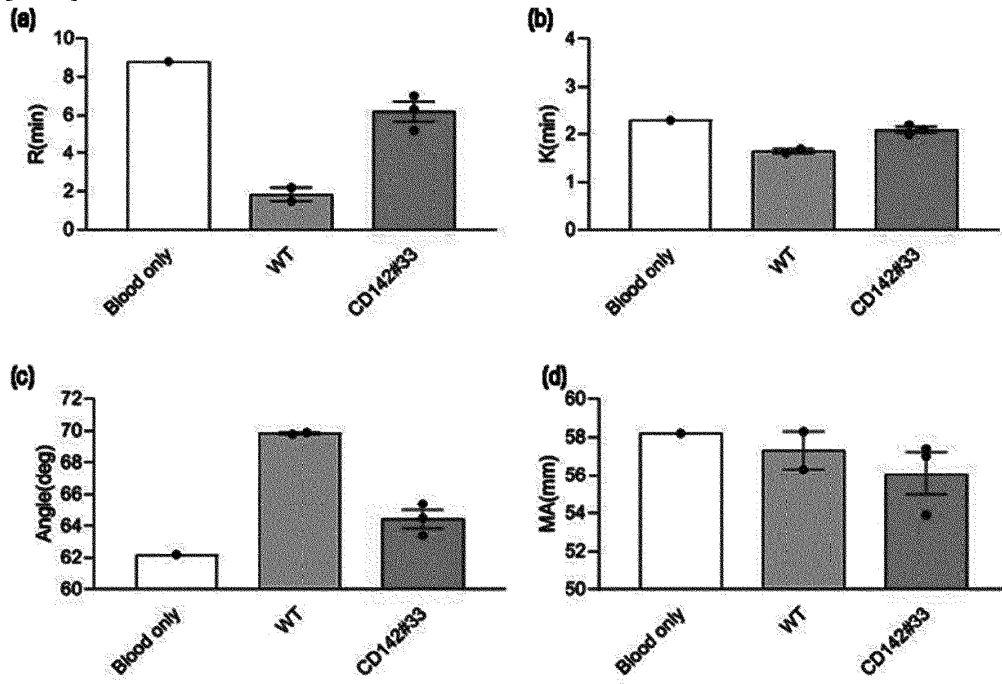
[도8]



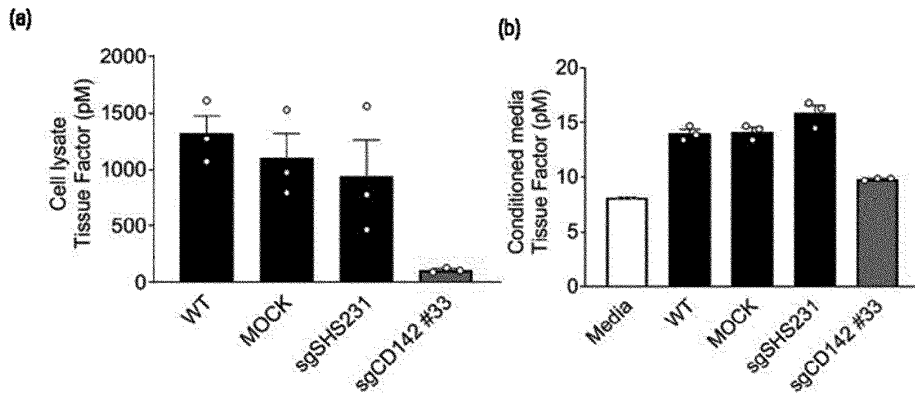
[도9]



[510]



[511]



[도12]

Gene	Fold change sgCD142#33 vs. Mock
DUSP18	2.383
CPT1C	2.291
SPATA33	2.235
SLC38A6	2.156
TCTA	2.139
SUGP1	2.037
PIP4K2C	1.847
JADE1	1.776
C18orf8	1.625
PDE8A	1.374
FKTN	1.198
C7orf49	1.144
AP4B1	0.955
P4HTM	0.947
SLC36A1	0.841
TRAPPC6A	0.797
VCAM1	0.786
GCDH	0.714
ZFPM2	0.666
GALT	0.658
SMN2	0.642
JADE2	0.588
FPGT	0.578
KIAA1549	0.571
CSF3	0.492
COL14A1	0.490
PDGFRA	0.489
KIF26B	0.456
CASKIN1	0.406
RPUSD2	0.367
HOTS	0.309
H19	0.309

[도13]

Filter: 9			Fold change
ID	Gene symbol	Antibody name	sgCD142#33 vs. Mock
1	TNFRSF9	4-1BB Receptor	1.900
21	KITLG	SCF	1.789
22	FASLG	sFas Ligand/Apo1L	1.898
32	IL4	IL-4	1.626
34	VEGFA	VEGF	1.854
111	CXCL10	IP-10	2.115
191	HDAC3	HDAC3	0.600
285	CGB3	beta hCG	0.646
293	KLK3	Free PSA	1.551