

Supplementary table S1: TWAS analysis results of osteomyelitis

Gene name	Chromosome	TWAS <i>P</i> value	Tissue
RP11-109P14.10	1	0.0026	lymphocytes
INPP5B	1	0.0029	lymphocytes
COX20	1	0.0068	lymphocytes
NTPCR	1	0.0091	lymphocytes
SF3A3	1	0.0096	lymphocytes
EIF2B3	1	0.0230	lymphocytes
ADAM15	1	0.0301	lymphocytes
EFCAB2	1	0.0332	lymphocytes
RP11-343N15.5	1	0.0337	lymphocytes
CLIC4	1	0.0363	lymphocytes
CTSS	1	0.0392	lymphocytes
ADC	1	0.0428	lymphocytes
ANGEL2	1	0.0480	lymphocytes
GLUD1P2	10	0.0143	lymphocytes
HPS1	10	0.0187	lymphocytes
USP28	11	0.0028	lymphocytes
UEVLD	11	0.0061	lymphocytes
NFRKB	11	0.0113	lymphocytes
APIP	11	0.0396	lymphocytes
CCT2	12	0.0154	lymphocytes
PRR4	12	0.0193	lymphocytes

TAS2R15	12	0.0345	lymphocytes
TAS2R14	12	0.0430	lymphocytes
YEATS4	12	0.0442	lymphocytes
CACNB3	12	0.0479	lymphocytes
CCDC122	13	0.0205	lymphocytes
LACC1	13	0.0326	lymphocytes
CHD8	14	0.0032	lymphocytes
GSKIP	14	0.0233	lymphocytes
ACOT4	14	0.0334	lymphocytes
CHURC1	14	0.0338	lymphocytes
CTD-2555O16.4	14	0.0432	lymphocytes
ADAMTS7	15	0.0046	lymphocytes
PLCB2	15	0.0064	lymphocytes
AVEN	15	0.0241	lymphocytes
ANKDD1A	15	0.0400	lymphocytes
CEP152	15	0.0482	lymphocytes
AC123768.4	15	0.0489	lymphocytes
RP11-303E16.8	16	0.0011	lymphocytes
C16orf46	16	0.0024	lymphocytes
BBS2	16	0.0200	lymphocytes
FN3KRP	17	0.0006	lymphocytes
SPATA20	17	0.0272	lymphocytes
MNT	17	0.0294	lymphocytes
UBALD2	17	0.0393	lymphocytes

RBFA	18	0.0286	lymphocytes
TPGS2	18	0.0375	lymphocytes
KDELRL1	19	0.0085	lymphocytes
PAK4	19	0.0163	lymphocytes
CCDC9	19	0.0236	lymphocytes
ALMS1	2	0.0179	lymphocytes
FNBP1P1	2	0.0288	lymphocytes
SNRNP27	2	0.0377	lymphocytes
ANKRD44	2	0.0389	lymphocytes
AHSA2	2	0.0439	lymphocytes
RP4-756G23.5	22	0.0018	lymphocytes
L3MBTL2	22	0.0275	lymphocytes
DGCR2	22	0.0276	lymphocytes
CTA-390C10.10	22	0.0442	lymphocytes
ACAA1	3	0.0431	lymphocytes
SNHG8	4	0.0312	lymphocytes
AC139887.4	4	0.0314	lymphocytes
RNF14	5	0.0094	lymphocytes
RP11-43F13.1	5	0.0142	lymphocytes
RPS23	5	0.0211	lymphocytes
ATP6AP1L	5	0.0266	lymphocytes
PFDN1	5	0.0353	lymphocytes
HSF2	6	0.0066	lymphocytes
PXDC1	6	0.0323	lymphocytes

PEX7	6	0.0392	lymphocytes
C6orf62	6	0.0410	lymphocytes
GLTSCR1L	6	0.0417	lymphocytes
RP11-425D10.10	6	0.0424	lymphocytes
PRKRIP1	7	0.0063	lymphocytes
WBSCR27	7	0.0087	lymphocytes
C7orf49	7	0.0257	lymphocytes
RP11-274B21.1	7	0.0276	lymphocytes
RP11-134L10.1	7	0.0311	lymphocytes
STAG3L5P-PVRIG2P-PIL RB	7	0.0341	lymphocytes
FIGNL1	7	0.0360	lymphocytes
PILRB	7	0.0363	lymphocytes
GS1-124K5.12	7	0.0365	lymphocytes
RP11-274B21.2	7	0.0414	lymphocytes
TGS1	8	0.0138	lymphocytes
SDAD1P1	8	0.0139	lymphocytes
URM1	9	0.0067	lymphocytes
TTF2	1	0.0030	blood
SF3A3	1	0.0031	blood
EFCAB2	1	0.0048	blood
C1orf57	1	0.0078	blood
ARNT	1	0.0093	blood
INPP5B	1	0.0170	blood

CD1E	1	0.0245	blood
CHI3L2	1	0.0267	blood
KIF1B	1	0.0296	blood
UTS2	1	0.0329	blood
C4BPA	1	0.0360	blood
ARHGAP19	10	0.0012	blood
ASB13	10	0.0027	blood
VTI1A	10	0.0189	blood
PITRM1	10	0.0219	blood
FRAT1	10	0.0395	blood
CASP7	10	0.0412	blood
UBE2D1	10	0.0444	blood
TFAM	10	0.0484	blood
C11orf10	11	0.0135	blood
CD59	11	0.0146	blood
CARS	11	0.0149	blood
C11orf92	11	0.0163	blood
LIN7C	11	0.0244	blood
FADS2	11	0.0268	blood
MED19	11	0.0312	blood
C11orf67	11	0.0430	blood
CD9	12	0.0120	blood
LYZ	12	0.0135	blood
GLIPR1	12	0.0184	blood

WNK1	12	0.0226	blood
KIF5A	12	0.0248	blood
KDM5A	12	0.0372	blood
IL26	12	0.0457	blood
BRI3BP	12	0.0479	blood
BCDIN3D	12	0.0495	blood
SPTLC2	14	0.0047	blood
C14orf159	14	0.0141	blood
RNASE6	14	0.0152	blood
GALC	14	0.0220	blood
SLC24A4	14	0.0352	blood
KIAA0391	14	0.0400	blood
HAUS4	14	0.0450	blood
LIPC	15	0.0073	blood
MAN2C1	15	0.0115	blood
ZSCAN29	15	0.0199	blood
RYR3	15	0.0277	blood
SNX1	15	0.0400	blood
MEFV	16	0.0034	blood
SNTB2	16	0.0102	blood
TRAP1	16	0.0125	blood
BCKDK	16	0.0235	blood
NFAT5	16	0.0479	blood
FN3KRP	17	0.0003	blood

CXCL16	17	0.0004	blood
MED31	17	0.0055	blood
RNF43	17	0.0232	blood
TADA2A	17	0.0304	blood
SPATA20	17	0.0308	blood
SAT2	17	0.0399	blood
PLEKHM1	17	0.0400	blood
FN3K	17	0.0418	blood
MPO	17	0.0429	blood
ALDH3A2	17	0.0500	blood
ENOSF1	18	0.0327	blood
ZNF586	19	0.0215	blood
DNASE2	19	0.0264	blood
ZNF561	19	0.0474	blood
ASB3	2	0.0038	blood
GPD2	2	0.0092	blood
MCM6	2	0.0117	blood
CYP26B1	2	0.0117	blood
USP34	2	0.0205	blood
DHRS9	2	0.0213	blood
PPIL3	2	0.0216	blood
FAM117B	2	0.0253	blood
CFLAR	2	0.0401	blood
MTERFD2	2	0.0414	blood

C2orf89	2	0.0441	blood
MARCO	2	0.0458	blood
YWHAB	20	0.0399	blood
TTC3	21	0.0098	blood
MCM3AP	21	0.0488	blood
CECR6	22	0.0290	blood
MIF	22	0.0344	blood
RAC2	22	0.0392	blood
ITIH4	3	0.0181	blood
EHHADH	3	0.0190	blood
PDCD6IP	3	0.0227	blood
LRIG1	3	0.0306	blood
THUMPD3	3	0.0414	blood
DNASE1L3	3	0.0466	blood
IL1RAP	3	0.0482	blood
HSD17B11	4	0.0175	blood
SCLT1	4	0.0203	blood
ABCG2	4	0.0225	blood
TBC1D14	4	0.0232	blood
PPM1K	4	0.0311	blood
DCTD	4	0.0311	blood
CYP4V2	4	0.0483	blood
RNF14	5	0.0171	blood
RPS23	5	0.0204	blood

SQSTM1	5	0.0215	blood
ACSL6	5	0.0282	blood
C5orf56	5	0.0317	blood
FAM114A2	5	0.0360	blood
TDRG1	6	0.0252	blood
JARID2	6	0.0321	blood
HIVEP2	6	0.0370	blood
PAQR8	6	0.0472	blood
ESYT2	7	0.0181	blood
TMEM140	7	0.0344	blood
HIP1	7	0.0433	blood
PILRB	7	0.0434	blood
MYOM2	8	0.0080	blood
TGS1	8	0.0175	blood
TPD52	8	0.0180	blood
FCN1	9	0.0048	blood
SEMA4D	9	0.0101	blood
OLFM1	9	0.0123	blood
ANKRD19	9	0.0245	blood
FRMD3	9	0.0261	blood
BRD3	9	0.0265	blood
TTF2	1	0.0041	blood
KLHL12	1	0.0062	blood
SYT11	1	0.0066	blood

MAD2L2	1	0.0093	blood
ANGEL2	1	0.0122	blood
DOCK7	1	0.0147	blood
ARNT	1	0.0165	blood
KCNAB2	1	0.0178	blood
CTSS	1	0.0189	blood
ZSWIM5	1	0.0223	blood
CTSK	1	0.0235	blood
UBQLN4	1	0.0240	blood
RUNX3	1	0.0241	blood
INPP5B	1	0.0251	blood
IPO9	1	0.0264	blood
ZNHIT6	1	0.0274	blood
AKR1A1	1	0.0293	blood
SLC22A15	1	0.0326	blood
TDRKH	1	0.0343	blood
PEA15	1	0.0359	blood
FAM69A	1	0.0385	blood
PHGDH	1	0.0385	blood
KIF1B	1	0.0394	blood
PPFIA4	1	0.0423	blood
DAP3	1	0.0446	blood
FCGR3B	1	0.0484	blood
TBX19	1	0.0495	blood

SLC27A3	1	0.0500	blood
FRAT1	10	0.0062	blood
PCBD1	10	0.0079	blood
SVIL	10	0.0150	blood
CCDC3	10	0.0235	blood
HTRA1	10	0.0309	blood
LARP4B	10	0.0334	blood
CCNY	10	0.0340	blood
DNAJB12	10	0.0388	blood
ALOX5	10	0.0401	blood
CKAP5	11	0.0010	blood
FADS1	11	0.0144	blood
TCIRG1	11	0.0153	blood
NDUFS8	11	0.0156	blood
CATSPER1	11	0.0157	blood
AQP11	11	0.0162	blood
SF3B2	11	0.0178	blood
PDGFD	11	0.0216	blood
IGSF22	11	0.0219	blood
PSMC3	11	0.0316	blood
IGSF9B	11	0.0338	blood
CLNS1A	11	0.0343	blood
MRPL23	11	0.0365	blood
INTS5	11	0.0388	blood

DIXDC1	11	0.0406	blood
ZBED5	11	0.0419	blood
TALDO1	11	0.0424	blood
ZBTB44	11	0.0459	blood
NRIP3	11	0.0477	blood
NAT10	11	0.0482	blood
VWF	12	0.0031	blood
CD9	12	0.0062	blood
PIP4K2C	12	0.0090	blood
TUBA1C	12	0.0092	blood
LYZ	12	0.0094	blood
TBC1D15	12	0.0119	blood
ITGB7	12	0.0157	blood
TUBA1B	12	0.0297	blood
CD4	12	0.0306	blood
CACNB3	12	0.0327	blood
KIAA1033	12	0.0340	blood
IKBIP	12	0.0350	blood
MBD6	12	0.0365	blood
DDX54	12	0.0368	blood
NINJ2	12	0.0370	blood
CSRNP2	12	0.0478	blood
GLIPR1	12	0.0484	blood
IL17D	13	0.0193	blood

ERCC5	13	0.0238	blood
FRY	13	0.0435	blood
CLYBL	13	0.0445	blood
EGLN3	14	0.0037	blood
RNASE6	14	0.0104	blood
TRIP11	14	0.0207	blood
ADCY4	14	0.0309	blood
ABHD4	14	0.0309	blood
KIAA0391	14	0.0323	blood
RAB2B	14	0.0496	blood
SNUPN	15	0.0073	blood
FAM174B	15	0.0192	blood
SPTBN5	15	0.0272	blood
AQP9	15	0.0275	blood
SLC24A1	15	0.0293	blood
MRPS11	15	0.0300	blood
IMP3	15	0.0326	blood
TUBGCP4	15	0.0407	blood
SERF2	15	0.0489	blood
NUBP1	16	0.0086	blood
APRT	16	0.0094	blood
CENPN	16	0.0122	blood
BBS2	16	0.0176	blood
PRR14	16	0.0223	blood

SNHG9	16	0.0260	blood
ST3GAL2	16	0.0361	blood
UBE2I	16	0.0379	blood
MAPK3	16	0.0398	blood
MON1B	16	0.0409	blood
HSD3B7	16	0.0491	blood
FN3KRP	17	0.0001	blood
TANC2	17	0.0062	blood
CNTNAP1	17	0.0104	blood
TAX1BP3	17	0.0152	blood
UBE2G1	17	0.0162	blood
ICAM2	17	0.0166	blood
KIAA0753	17	0.0190	blood
CYB561	17	0.0194	blood
FZD2	17	0.0207	blood
SPATA20	17	0.0213	blood
GPRC5C	17	0.0270	blood
KDM6B	17	0.0311	blood
SARM1	17	0.0327	blood
ARMC7	17	0.0361	blood
TIMM22	17	0.0402	blood
PSMB6	17	0.0430	blood
ARL17B	17	0.0493	blood
PIGN	18	0.0387	blood

COL5A3	19	0.0033	blood
ZNF154	19	0.0069	blood
SNAPC2	19	0.0075	blood
ZNF558	19	0.0082	blood
DMWD	19	0.0086	blood
LRP3	19	0.0183	blood
FXYD5	19	0.0213	blood
RABAC1	19	0.0255	blood
TYK2	19	0.0261	blood
POLRMT	19	0.0293	blood
MAN2B1	19	0.0361	blood
NDUFA3	19	0.0366	blood
AMH	19	0.0385	blood
CFD	19	0.0414	blood
HSD17B14	19	0.0458	blood
CYP4F22	19	0.0490	blood
FAM136A	2	0.0004	blood
DHRS9	2	0.0058	blood
GPD2	2	0.0100	blood
RBM45	2	0.0102	blood
FAM117B	2	0.0133	blood
ANXA4	2	0.0155	blood
COBLL1	2	0.0196	blood
ID2	2	0.0198	blood

CCDC93	2	0.0212	blood
MCM6	2	0.0233	blood
SERPINE2	2	0.0273	blood
ZC3H8	2	0.0277	blood
ALMS1	2	0.0291	blood
HEATR5B	2	0.0295	blood
CYP1B1	2	0.0312	blood
AHSA2	2	0.0391	blood
TTC27	2	0.0410	blood
SERTAD2	2	0.0440	blood
ANKRD44	2	0.0444	blood
RAB11FIP5	2	0.0445	blood
ATP5E	20	0.0218	blood
YWHAB	20	0.0252	blood
IFNGR2	21	0.0272	blood
TMEM50B	21	0.0310	blood
RABL2B	22	0.0074	blood
CRKL	22	0.0183	blood
EIF3L	22	0.0295	blood
CECR6	22	0.0315	blood
NOL12	22	0.0385	blood
CHCHD10	22	0.0481	blood
RPUSD3	3	0.0064	blood
TRAT1	3	0.0111	blood

SPCS1	3	0.0120	blood
OPA1	3	0.0129	blood
CCDC50	3	0.0131	blood
TMEM110	3	0.0154	blood
VPS8	3	0.0172	blood
TMEM43	3	0.0176	blood
RPL14	3	0.0190	blood
IL1RAP	3	0.0202	blood
KCNMB3	3	0.0212	blood
DNASE1L3	3	0.0256	blood
CMTM7	3	0.0265	blood
RAB5A	3	0.0294	blood
ITIH4	3	0.0304	blood
STAG1	3	0.0308	blood
ZNF589	3	0.0370	blood
NKTR	3	0.0392	blood
DHFRL1	3	0.0394	blood
SLC41A3	3	0.0396	blood
CEP70	3	0.0411	blood
RFTN1	3	0.0414	blood
THOC7	3	0.0449	blood
DHX36	3	0.0481	blood
SH3TC1	4	0.0080	blood
FAM53A	4	0.0123	blood

MYL5	4	0.0138	blood
PRDM8	4	0.0162	blood
SDAD1	4	0.0192	blood
PLAC8	4	0.0268	blood
TADA2B	4	0.0347	blood
LIN54	4	0.0377	blood
MEF2C	5	0.0123	blood
SQSTM1	5	0.0146	blood
ATP6AP1L	5	0.0249	blood
PAPD4	5	0.0333	blood
CAMLG	5	0.0392	blood
SRP19	5	0.0428	blood
CMBL	5	0.0494	blood
PPIL1	6	0.0051	blood
PIM1	6	0.0063	blood
ASCC3	6	0.0068	blood
HSF2	6	0.0075	blood
PEX7	6	0.0113	blood
MAP3K5	6	0.0198	blood
DOPEY1	6	0.0231	blood
STXBP5	6	0.0281	blood
SLC35B3	6	0.0396	blood
GMDS	6	0.0441	blood
STK38	6	0.0484	blood

CPNE5	6	0.0488	blood
ABHD11	7	0.0015	blood
RPA3	7	0.0027	blood
VPS41	7	0.0037	blood
RSBN1L	7	0.0045	blood
TRIP6	7	0.0063	blood
TMEM60	7	0.0070	blood
WBSCR27	7	0.0088	blood
CHST12	7	0.0109	blood
SMARCD3	7	0.0118	blood
COPG2	7	0.0158	blood
ZNF138	7	0.0200	blood
FIGNL1	7	0.0207	blood
MYO1G	7	0.0295	blood
HIP1	7	0.0368	blood
GSTK1	7	0.0372	blood
TBXAS1	7	0.0423	blood
POLM	7	0.0462	blood
SUMF2	7	0.0468	blood
KIAA0196	8	0.0036	blood
AGPAT5	8	0.0040	blood
CPNE3	8	0.0088	blood
ZDHHC2	8	0.0150	blood
MYOM2	8	0.0217	blood

NUDT18	8	0.0297	blood
CNOT7	8	0.0335	blood
GGH	8	0.0358	blood
DOCK5	8	0.0360	blood
NBN	8	0.0432	blood
TMEM71	8	0.0481	blood
RMI1	9	0.0001	blood
GKAP1	9	0.0057	blood
FCN1	9	0.0065	blood
ENDOG	9	0.0125	blood
GCNT1	9	0.0137	blood
SLC2A6	9	0.0168	blood
SIGMAR1	9	0.0177	blood
SNAPC4	9	0.0213	blood
NOXA1	9	0.0230	blood
BRD3	9	0.0264	blood
KIF27	9	0.0289	blood
BAG1	9	0.0346	blood
UAP1L1	9	0.0429	blood
SPAG8	9	0.0479	blood
CENPP	9	0.0483	blood

Supplementary table S2. Gene ontology enrichment analysis results of differently expressed genes identified by mRNA expression profiles of osteomyelitis

Gene ontology	<i>P value</i>	Fold enrichment
GO:0005886~plasma membrane	0.0001	0.1963
GO:0000786~nucleosome	0.0004	0.4958
GO:0006342~chromatin silencing	0.0017	2.6996
GO:0070062~extracellular exosome	0.0027	3.5241
GO:0005887~integral component of plasma membrane	0.0056	7.1380
GO:0004872~receptor activity	0.0072	9.8715
GO:0002377~immunoglobulin production	0.0150	22.0226
GO:0040037~negative regulation of fibroblast growth factor receptor signaling pathway	0.0150	22.0226
GO:0005891~voltage-gated calcium channel complex	0.0164	19.7747
GO:0031093~platelet alpha granule lumen	0.0193	22.7858
GO:0005794~Golgi apparatus	0.0199	23.4881
GO:0030032~lamellipodium assembly	0.0213	29.8477
GO:0007596~blood coagulation	0.0261	35.3570
GO:0070588~calcium ion	0.0275	36.8301

transmembrane transport		
GO:0060065~uterus development	0.0288	38.2220
GO:0000139~Golgi membrane	0.0300	33.3548
GO:0001786~phosphatidylserine binding	0.0306	35.8600
GO:0070382~exocytic vesicle	0.0310	34.2616
GO:0015695~organic cation transport	0.0328	42.2995
GO:0005245~voltage-gated calcium channel activity	0.0374	41.9805
GO:1902613~negative regulation of anti-Mullerian hormone signaling pathway	0.0381	47.2624
GO:0009898~cytoplasmic side of plasma membrane	0.0433	44.4853
GO:0016021~integral component of membrane	0.0439	44.9613
GO:0004888~transmembrane signaling receptor activity	0.0457	48.7786
GO:0007275~multicellular organism development	0.0458	53.7708
GO:0060271~cilium morphogenesis	0.0478	55.3575
GO:0009986~cell surface	0.0484	48.3302
GO:0002576~platelet degranulation	0.0487	56.0574
GO:0007015~actin filament	0.0499	56.9775

organization
