## Supplementary

Table S1 The 11 primers of the prognostic OS-DEGs

Species	Gene name	Gene ID	Primer-F (5'-3')	Primer-R (5'-3')	Length (bp)
Human	LDHA	3939	CAGCCCGATTCCGTTACCTAA	GAGACACCAGCAACATTCATTCC	130
Human	PTPRN	5798	CGGGACACATGATTCTGGCAT	CTGCTTGGTAGGCACAGAGG	93
Human	TRAP1	10131	TGCGAGATGTGGTAACGAAGTA	GTAGCGGTAGAACTCCTCATGT	143
Human	GPR37	2861	GTGACCAGTGATGACAATGACAA	CAGCAATGAGTTCCGACAGAAG	110
Human	SIRPA	140885	CCAACAACCACACGGAGTATG	ATGTCCAGGTCAGCATAGGTG	85
Human	CDK1	983	GGGTCAGCTCGTTACTCAACTC	GGAGTGCCCAAAGCTCTGAAA	140
Human	ECT2	1894	GGCTCAGTGGAGGGAAGAAGT	GACAAGGGAGGGAGAAGGGATAC	102
Human	ADA	100	TTGACTACTACATGCCTGCTATCG	ACATACACCACGCCCTCTTTG	100
Human	COL1A1	1277	TAGGGTCTAGACATGTTCAGCTTTG	CGTTCTGTACGCAGGTGATTG	142
Human	SESN3	143686	CCTTCCTCTACCATACAGGCACTA	ACCATTCAACCACTCAGCAATACC	127
Human	BTK	695	GATGTATAGCAAGTTCAGCAGCAA	GGCAATGTGTTCAGCAGTCTC	127

OS-DEGs, oxidative stress-related differentially expressed genes.

Table S2 74 genes were identified as OS-DEGs  $\,$ 

BATB	EntrezID	Gene	Log <sub>2</sub> FoldChange	P value	P <sub>adj</sub>	Direction
PachPa	5831	PYCR1	3.336696	6.87E-251	6.16E-248	Up
nd	2146	EZH2	2.908288	6.99E-207	2.13E-204	Up
Bit A         Control         Control         Control         Control         Control           APT         CACT         -2.00000         2.000-110         Control         Control           APT         -2.00000         2.000-110         Control         Control           SDIG         APAC         -4.7020         1.355-121         Control         Control           SDIG         APAC         -4.7020         1.355-121         Control         Control           SDIG         APAC         -4.7020         1.355-121         Control         Contro         Control         Control <t< td=""><td>983</td><td>CDK1</td><td>2 996593</td><td>1 44F-174</td><td>2 54F_172</td><td>Un</td></t<>	983	CDK1	2 996593	1 44F-174	2 54F_172	Un
Barl         C.D.7         J. J. 200500         J. 2005-102         J. 2016-103         J. 2016-117         D. 2016-103         J. 2016-103 <thj. 2016-103<="" th=""> <thj. 2016-103<="" th=""> <thj. 2016-<="" td=""><td>1004</td><td>COTO</td><td>2.000000</td><td></td><td>2.34E-172</td><td>Up</td></thj.></thj.></thj.>	1004	COTO	2.000000		2.34E-172	Up
al/	1894	ECT2	2.763503	2.69E-162	3.79E-160	Up
BED2         PM202         -1.4070         4.200         9.200         9.200         Deam           0549         NAD4         -7.7027         1.362-124         9.245-121         Deam           0549         NAD4         -7.7027         1.362-124         9.245-114         Deam           10131         NAD4         -1.3077         4.05-107         1.716-102         Deam           1029         1.6857         1.344707         4.05-107         1.262-101         Up           1030         .98597         7.227-127         7.85-62         2.546-63         Up           1041         .7247-12         .722-127         0.267-73         Deam           10531         .7247-12         .22547         4.068-73         0.126-73         Deam           10531         .7247         .22547         4.068-73         0.126-73         Deam           10531         .7477         .3545         2.746         4.366-30         Deam           10531         .7477         .3545         2.746         4.366-30         Deam           10541         .7477         .3545         2.746         4.366-30         Deam           10542         .74774         .24564         .456-4	847	CAT	-2.00266	2.26E-155	2.73E-153	Down
Babl         HBA1        4.2480         1.345.123         Bable 119         Deem           2640         HBA1         2.4.2719         2.4.45.171         Deem           2643         TADP         1.4.5521         2.4.67.101         1.4.54.171         Deem           27244         S.2.51/1         1.4.5471         1.0.64.77         4.5.52-68         Up           3733         HS071         1.4.5471         3.4.46-63         1.21-6-1         Up           6773         S.0.6427         2.5.14-67         7.878-46         Up           6784         J.2.6474         3.604-76         Up         Up           110.1         HO3A         J.2.6474         3.604-76         Up         Up           110.1         HO3A         J.2.6474         3.604-76         Up         Up           110.1         HO3A         J.2.6474         3.604-76         Up         Up         Up           110.1         HO3A         J.2.6474         J.2.6476         Up         Up         Up           110.1         HO4A         J.2.646         J.0.64-8         Up	8692	HYAL2	-1.49078	4.90E-131	3.82E-129	Down
RendHardHardHardHardHardHardHardHardHard10311242112231257-1031244-101100-071264-101100274435807-1461731400-074270-40100100173705831261731400-074260-4000173805807126172758-022460-0700017111704012479302478-306227-3100018031704112607111-7400000019051717125152474-701277-700019051717125152474-701287-8000019051717125152474-701287-80000191704064-269611278-910000019180407125152474-771492-800001917125152474-771492-800000019180407-269141256-801508-800001919171704054-269151568-900001919171704054-269171256-901508-9019201681787-268191268-9000019311787-4697256-601568-9000019311787-4697256-601568-9000019321787-4697256-601568-9000019311787-4697256-601568-90000 <td>3040</td> <td>HBA2</td> <td>-4.27436</td> <td>1.35E-124</td> <td>9.28E-123</td> <td>Down</td>	3040	HBA2	-4.27436	1.35E-124	9.28E-123	Down
30.3 <i>Hell</i> -1.45232.475-062.145-11Up1013177.671.52714.425-101.376-14Up3234.167011.461711.06974.326-91Up3235.6262.1361122.445-911.246-91Up67.73.6262.227862.445-911.246-91Up67.84.6262.22786.2478-72.2478-72Up1014.7036.22787.2478-73.2028-71Up1055.6772.22787.2478-73.116-74.00071055.6772.227847.466-75.116-74.00071055.6777.23234.1478-74.45664Up1728.0071.23234.1478-74.0007.00071738.7077.23234.2476-07.45664.00071741.67645.28755.116-74.0007.00071737.0477.23234.1478-81.0007.00071742.46645.2875.728-69.0007.00071743.6767.2765.1078-81.00071744.46647.1078-71.0007.0017.00171743.6767.2765.1264-81.00071744.47647.1087-71.2765.0017.00171744.47647.1016-71.2017.0017.00171745.6767.11647.11647.00071744.47647.10167.1264 <td>3039</td> <td>HBA1</td> <td>-4.77027</td> <td>1.34E-120</td> <td>8.54E-119</td> <td>Down</td>	3039	HBA1	-4.77027	1.34E-120	8.54E-119	Down
101311269/1277-001.58-010.002724422501-1.52714.452-001.716-1000.0050252.00101.446731.646-074.262-600.0050262.02032.516-077.588-062.626-00.005111-2.00401.520742.516-077.588-060.005111-2.00401.520742.516-072.516-070.005111-2.00401.520742.526-170.000.005111-2.00401.520742.516-072.177-20.005015.00741.520741.116-740.000.005016.00711.520102.016-030.000.001015.00711.520102.026-040.000.001017.01617.016741.526-100.000.001017.0161.02671.026711.007-180.001013.01671.02671.026711.007-180.001014.02671.02671.026711.007-180.001015.01671.02671.026711.007-180.001016.01671.01672.02640.000.001017.02671.02671.02674.026740.001018.01671.01674.01674.016740.001017.02671.02674.02674.026740.001017.02671.02674.02674.026740.0010161 <td>3043</td> <td>HBB</td> <td>-4.44424</td> <td>3.62E-119</td> <td>2.24E-117</td> <td>Down</td>	3043	HBB	-4.44424	3.62E-119	2.24E-117	Down
1.1.1         1.1.2.1         1.2.2.4         1.7.12-10         Down           2294         AED         1.4.2017         1.0.6-17         4.2.2.6.0         Up           2295         AEDAT         7.2.7.22         7.55-2.4         2.4.4.5-10         Up           2276         AEDAT         7.2.7.22         7.55-2.4         2.4.4.5-00         Up           2276         AEDAT         1.2.4.007         2.4.5.6-17         C.4.5.7.7         C.4.5.7         Up           1016         TCUAS         -2.2.9.2.5         2.4.7.7         C.4.5.7.7         Up         Down           1017         TCUAS         -2.2.9.2.2.4         4.487-76         1.118-74         Down           1026         TCUAS         -2.2.9.2.2.4         4.487-76         1.116-74         Down           1026         TCUAS         -2.2.9.2.2.4         4.477-67         4.5.5.6         Down           1026         TCUAS         -2.4.0.01         1.477-68         4.5.5.6         Down           1027         TCUAS         -2.4.0.01         1.352-61         Down         Down           1028         L.2.9.7.7         2.2.5.61         3.552-76         Down         Down           10281         L	10131	TRAP1	1 2559	2 87E-106	1.34E-104	Un
Arase         Arase         Arase         Arase         Arase         Arase         Arase           S702         ASDA         1.44673         ASDA         A224-01         Up           S732         ASDA         A22403         A251-07         A286-08         Down           S733         ASDA         A227064         A226-08         A226-08         Down           S111         APDA         A22607         A362-07         A362-07         Up           S105         ALVA         A22607         A362-07         Up         Down           S105         ALVA         A22607         A362-07         A362-07         Up           S105         ALVA         A22607         A362-07         A362-07         Up           S105         ALVA         A22607         A362-07         A362-07         Up           S105         ALVA         A22607         A362-07         Up         Down           S105         ALVA         A22607         A362-07         Up         Down           S105         AVE7         A262-07         A362-07         Up         Down           S105         AVE7         A362-07         A362-07         Down         Down <td>07044</td> <td>SESNI1</td> <td>1 50701</td> <td>4.025 102</td> <td>1.71E 100</td> <td>Dewn</td>	07044	SESNI1	1 50701	4.025 102	1.71E 100	Dewn
289         APA         1.441/3         1.484-9         1.424-9         Up           25732         CEX0         1.2671/2         7.484-90         1.424           2674         ALE         2.2552         2.277.73         2.824-80         Up           5111         ACXA         1.3497/1         2.802-87         8.804-82         Up           5111         ACXA         1.3497/1         2.802-87         8.804-82         Up           10165         ALPA         1.3927/1         2.802-87         0.802-73         0.907           10165         ALPA         1.3928/1         2.802-87         0.907         0.907           10165         ALPA         1.3928/1         2.802-81         0.802-81         0.907           10273         ALT7         1.55115         2.742-87         4.802-84         0.907           10274         AL907         2.2027/8         4.802-84         1.907-85         0.907           10274         AL907         2.2027/8         4.802-84         1.752-85         0.907           1030         AL97         2.2027/8         4.802-84         4.742-84         0.907           1041         AL97         2.2027/8         4.802-84	27244	SESINI	-1.52721	4.02E-102	1.7 IE-100	Down
5738         CB24         1.044/32         3.484-34         1.345-34         Up           676         50007         7.657-2         7.567-26         2.427-69         Up           1511         ACXA         1.4480/4         2.027-67         7.867-86         Up           1514         ACXA         1.3680-75         4.567-75         Up           1599         LPP4         1.3580-76         5.567-75         Up           1593         LPP4         1.3580-76         5.566-75         Up           1728         MOOI         2.597-36         5.266-62         Up         Up           1728         MOOI         2.597-36         5.266-62         4.66-44         Up           1734         KAXA         2.4464         1.227-41         1.987-68         Down           1741         KAXA         2.4464         1.227-41         1.987-68         Down           1743         MAXA         2.4464         1.227-41         1.987-68         Down           1744         MXAA         2.42474         1.227-41         1.987-69         Down           1743         A.647         2.20274         4.867-69         1.027-69         Down           1744	3329	HSPD1	1.443673	1.09E-97	4.32E-96	Up
B278         B284         B284         Deen           B46         CD265         -2.9245         D.261         B284-32         Up           B111         ACXA         1.54974         D.024-50         B.582-42         Up           B181         LAPA         L.20174         D.024-10         D.024-70         D.024-70         Up           10355         L.2017         D.25427         D.046-70         D.047-70         Up           10365         L.2017         D.25427         D.046-70         D.047-70         Up           10365         D.907         D.54929         L.107-80         D.057-90         Up           10370         D.907         D.54929         D.027-80         D.067-90         Up           10371         D.661         -2.98910         C.202-80         D.664-80         D.007-10           10431         D.057         -2.92740         L.406-91         D.078-90         D.007           10441         D.057         -2.92740         L.406-91         L.107-90         D.007           10441         D.057         D.9274         L.406-91         L.107-90         D.007           10451         D.9274         D.40640         D.927-40         D	57332	CBX8	1.364132	3.46E-93	1.24E-91	Up
BAB         CDOB         C-2443         S11. PC         ABE AB         Down           1511         ACAA         15492         2.071.59         6.202.73         Down           1553         ADAA         1.5692         2.071.79         6.202.73         Down           1555         AUZ         2.2347.41         4.862.73         0.112.73         Up           1555         AUZ         2.2347.41         4.862.70         0.201.72         Up           1571         AUX         2.2349.71         1.212.72         Up           1571         AUX         2.2449.81         1.201.74         Up           1571         AUX         2.2649.11         1.201.74         Up           1573         AUX         2.201.71         1.301.74         Up           1574         AUX         2.201.72         1.301.74         Up           1573         AUX         2.201.72         1.301.74         Up           1574         AUX         2.201.74         4.302.75         Up           1574         AUX         2.301.74         4.302.74         Up           1574         AUX         2.301.74         4.302.74         Up           1574	6278	S100A7	7.627122	7.58E-92	2.64E-90	Up
S111PCNA1.4407.40.00E A30.50E A2Up10516PCNA1.2007.60.2017.70.00E 7.50.00E10560A.D.7-2.2042.74.60E 7.61.11E 7.40.00E10560A.D.7-2.2003.40.40E 7.60.11E 7.40.00E10750A.P.671.5311.62.74E-074.90E-060.00E10273A.D.71.5311.62.74E-074.90E-060.00E10274A.D.711.5311.62.74E-074.90E-060.00E10273A.P.711.5311.62.74E-074.90E-060.00E1038P.P.91-2.2021.60.80E-020.50E-520.00H2573M.M.1-2.2027.64.88E-907.5EE-850.00H1043D.S.97-2.0227.64.88E-907.5EE-850.00H1043D.S.97-2.0227.64.88E-907.5EE-850.00H1043D.S.97-2.0227.64.88E-907.5EE-850.0H1043D.S.97-2.0227.64.88E-944.37E-530.0H1043D.S.97-2.027.64.88E-944.37E-530.0H1133D.S.97-1.49835.2EE-630.0H0.0H1235D.S.97-1.69631.0FE-630.0H0.0H1235D.S.971.2224.44.88E-940.0H0.0H1235D.G.1412.1879.10.0EE-453.8EE-410.0H1235D.G.1412.8874.31.30E-410.0H0.0H1236<	948	CD36	-2.92453	2.51E-87	7.89E-86	Down
1536 <i>FAUNS</i> -2.2050         2.477-79         6.267-70         Up           8889 <i>LUMA</i> 1.30074         2.806-76         U.III-17-1         Up           10160 <i>APP</i> 1.464297         1.010-73         2.17E-72         Up           10167         MATT         1.36415         2.7E-67         4.961-64         Up           1017         MATT         1.36415         2.7E-67         4.961-64         Up           8047         MATT         1.36415         2.7E-67         4.961-64         Up           8048         MATT         2.50446         4.8E-64         1.05E-63         Doorn           8048         MATT         2.50447         1.05E-53         Doorn         1.00E-59         Doorn           1016 <i>FDNY</i> -2.0412         1.06E-50         1.56E-53         Doorn           1016 <i>FDNY</i> -2.0412         4.88E-54         4.05E-54         Doorn           1016 <i>FDNY</i> -2.0412         4.88E-54         4.05E-54         Up           1015 <i>FDNY</i> -2.0412         4.88E-54         4.05E-54         Up           1115 <i>FDNY</i> 2.36161	5111	PCNA	1.546974	3.06E-83	8.59E-82	Up
LDMA         1.50020H         3.50E-76         8.05E-75         Up           1005         AL72         -2.5447         4.66E-76         1.11E-74         Dawn           1027         NC01         2.207394         1.44E-76         2.11E-74         Up           1228         MOO1         2.207394         1.44E-40         2.82E-48         Up           1271         NC171         1.3515         2.74E-67         4.86E-68         Up           5073         NTAL         -2.68608         2.56E-62         4.86E-68         Dawn           5073         NTAL         -2.68618         1.26E-60         Dawn         Dawn           5080         A.6         -2.88919         7.02E-60         1.05E-68         Dawn           1966         A.7X         -0.0677         2.02E-60         0.85E-53         Dawn           1967         2.02748         4.86E-58         7.64E-53         Dawn           1968         A.977         2.361654         1.46E-53         Dawn           1971         S.74F         3.561654         1.45E-54         Dawn           2353         A.058         -2.02464         1.37E-50         Dawn           1971         D.04743	10516	FBLN5	-2.27056	2.47E-79	6.22E-78	Down
abb         bbb         bbb         bbb         bbb         bbb           10056         KV2         -2.24847         4.88-74         1.015-74         Upon           10105         PPF         1.54497         1.015-73         2.757-72         Up           10278         NOT         2.07847         4.855-84         Up           10278         NOT         2.07847         4.855-84         Up           8741         KCMAA         -2.46465         5.865-63         1.056-83         Down           8013         MP4A3         -2.60421         1.225-61         1.055-83         Down           8040         NA         -2.30121         4.855-83         Down         1.006-40         Down           1043         D.02971         -2.20122         1.085-93         Down         1.097	3030		1 300204	3 50E-76	8.06E_75	Lip
1105         1105         11111         11111         11111        <	3939	LDITA	1.590294	3.30E-70	8.00=75	op
10105         PPF         1.54.997         1.01E.73         2.17E.72         Up           1127         NOC1         2.0079.01         1.474.94         2.82.96         Up           1127.9         NET1         1.3941.9         2.74E.97         4.98E-96         Up           1017.9         1.598.66         2.55E.62         4.06E.40         Up           9013         MPAL         -2.89491         1.22E-81         1.900-80         Down           3673         MPAL         -2.89491         7.2EE.00         1.07E-58         Down           1965         LBM         -2.69172         7.27E-56         3.66E-56         Down           1943         DDSPT         -1.49772         2.72E-56         3.66E-56         Down           1943         DDSPT         -3.70283         5.22E-53         8.34E-32         Up           2713         TSTA         -3.70283         5.22E-53         8.34E-32         Up           2734         KAM82         -1.19605         4.01E-44         4.77E-48         Down           1719         DUFFA         1.016432         3.87E-41         Up           1734         A.6982         -2.09841         1.01E-47         1.66E-44 <t< td=""><td>10365</td><td>KLF2</td><td>-2.25447</td><td>4.86E-76</td><td>1.11E-74</td><td>Down</td></t<>	10365	KLF2	-2.25447	4.86E-76	1.11E-74	Down
1726         ND71         232734         147E-69         235E-66         Up           15276         NET         1.55E-63         Dawn           5718         PTIVIN         2.58665         1.55E-63         Dawn           3673         MPAL         -2.68665         2.58E-62         4.68E-61         Up           3673         MPAL         -2.68075         2.58E-62         4.68E-60         Down           3660         N.6         -2.8815         7.26E-60         1.07E-68         Down           3660         N.6         -2.8815         7.26E-60         1.07E-68         Down           1043         2.03E71         -2.02746         4.46E-59         7.64E-68         Down           1043         2.03E71         -1.77824         3.46E-44         4.57E-78         Down           1050         DFT         -1.77258         3.28E-53         3.88E-62         Up           2733         KOMER         -1.0685         1.7E-64         1.88E-62         Up           2735         FOS         -2.01246         1.11E-49         1.28E-43         Up           1717         DHFR         1.13654         A.46E-46         6.78E-47         Up <td< td=""><td>10105</td><td>PPIF</td><td>1.546297</td><td>1.01E-73</td><td>2.17E-72</td><td>Up</td></td<>	10105	PPIF	1.546297	1.01E-73	2.17E-72	Up
Intra         Netri         1.3.416         2.7.44-rr         4.488-66         Up           2741         NCMAS         -2.24685         2.886-62         1.508-63         Down           8013         NFMAZ         -2.26661         1.225-61         1.508-63         Down           3873         NFMAZ         -2.26122         1.885-89         Down           388         LKS         -2.28815         7.286-60         1.075-88         Down           1895         DKN         -2.28122         1.885-89         T.060         Down           8453         DKN         -1.428241         3.486-54         4.477-83         Down           8451         DKN         -1.47824         3.486-54         4.477-84         Up           6770         STAR         3.702086         2.528-53         0.346-72         Up           1719         DFR         1.014032         2.876-43         1.416-4         Up           1728         CLMA         -1.3065         3.468-43         0.387-4         Up           1719         DFR         1.01492         2.876-4         Up         Up           1738         DFMA         2.280291         1.088-41         1.088-41 <t< td=""><td>1728</td><td>NQO1</td><td>2.907394</td><td>1.47E-69</td><td>2.83E-68</td><td>Up</td></t<>	1728	NQO1	2.907394	1.47E-69	2.83E-68	Up
3741         COVAS         -264685         1.88E-63         1.902-83         0.000           578         PTPNN         2.586640         2.2866.62         4.066.61         0.000           8373         MPALT         -2.31031         4.065-00         0.867-00         0.000           8360         M.G.         -2.231031         4.065-00         0.865-80         0.000           8460         D.UNPI         -2.02745         4.865-90         7.045-80         0.000           1843         O.UNPI         -2.02746         4.865-91         7.045-80         0.000           1843         O.UNPI         -2.02746         4.865-91         7.045-80         0.000           1845         M.M.G.         1.466-33         1.835-82         0.000           1710         D.F.F.         1.312-81         0.000         0.000           2035         F.O.S         -2.01246         1.11E-40         1.225-48         0.000           1710         D.F.F.         0.131-84         0.000         0.000         0.000         0.000           12082         J.D.F.F.         0.131-45         U.P.         0.000         0.000         0.000           1217         C.O.L.L.L         2.3315<	10276	NET1	1.35415	2.74E-67	4.96E-66	Up
578         PTPN         5.50865         2.568-62         4.068-61         1.000-80           6013         MPKA3         -2.68641         1.228-61         1.000-80         Down           5860         I.66         -2.88015         7.268-60         1.078-58         Down           1864         E.DVI         -2.08122         1.088-99         1.588-98         Down           1864         E.DVI         -2.08122         1.088-91         3.068-55         Down           1864         E.DVI         -2.08122         1.088-91         3.068-55         Down           605         B.WY         -1.07024         4.481-53         1.437-53         Down           615         B.MY         -1.07026         1.717-9         1.217-49         Down           2033         F.OS         -2.01045         1.117-59         1.217-49         Down           1038         E.DMME7         -1.01852         2.387-42         4.172-48         Up           1037         C.OLMA         2.13375         6.466-4         6.376-4         Up           1038         E.DMME7         1.388-47         1.088-41         Up           1039         E.DMK         -1.33765         6.466-4	3741	KCNA5	-2.64665	8.86E-65	1.50E-63	Down
1.1.2.1.1         1.1.2.1.4         1.1.2.1.4         1.1.2.1.4         1.001-0           3373         H'HL1         -2.31031         4.682-00         1.681-59         Down           3690         L.B         -2.32813         7.282-60         1.075-58         Down           1843         DUSP1         -2.02122         1.050-59         1.565-58         Down           1843         DUSP1         -2.02748         4.885-92         7.045-83         Down           655         BMF7         3.361654         1.487-53         M.847-52         Up           6770         S77A7         3.702930         5.325-53         G.848-59         Up           2335         FOSS         BMF7         1.014022         3.87E-40         L21E-49         Down           2335         FOS         -1.13655         8.49E-48         8.81E-47         Down           2335         FLK3         -1.13655         8.49E-48         8.81E-47         Down           12882         FLK3         -1.13655         8.49E-48         8.37E-45         Up           12883         FLK3         -1.13655         8.49E-48         3.38E-44         Up           12884         MMF9         2.206823	5798	PTPRN	3.569865	2.56E-62	4.06E-61	qU
0.03         10.04-0         1.020-00         1.020-00         0.0000           3573         10.04-00         0.0000         0.0000           3660         LÉ         -2.88016         7.280-00         1.050-58         Down           1906         LÉ         -2.88116         7.280-00         1.055-58         Down           606         BTK         -1.00077         2.755-66         3.065-53         Down           605         BMT         -3.19184         1.482-53         1.821-52         Dp           6170         STAR         5.702074         3.1075-50         1.212-40         Down           6253         FDOS         -0.10463         1.075-50         1.212-40         Down           7170         STAR         5.7020744         1.116-43         1.222-44         Down           1277         COLTAT         2.163711         5.662-46         6.312-45         Down           1283         PKR         -1.01692         4.352-45         4.332-44         Up           1277         COLTAT         2.20831         1.025-47         Up         Down           1284         PMFR         -1.10323         3.524-45         4.332-44         Up	8013	NP/A3	-2 66/61	1 225-61	1 90F_60	Down
3.1.3         1.774.1	0070		-2.00401	1.222-01		Down
3689 <i>L.6</i> -2.200515         7.200059         1.0700000000000000000000000000000000000	3373	HYAL1	-2.31031	4.63E-60	6.86E-59	Down
1900         EDN*I         -2.05122         1.05E-59         1.5E-58         Down           1943         DUSPI         -2.02740         4.88E-59         7.04E-58         Down           2113         ETST         -1.47924         3.48E-54         4.37E-53         Down           2113         ETST         -1.47924         3.48E-53         1.88E-52         Up           2135         BMAP         3.361854         1.48E-53         1.88E-52         Up           2135         ROMR         -1.06863         1.07E-50         2.12E-49         Down           2383         ROS         -2.01246         1.11E-49         1.27E-48         Dp           1277         COL1A1         2.153711         5.06E-48         5.08E-47         Dpwn           12002         LRN2         -1.3055         6.46E-48         6.31E-45         Up           12032         LRN2         -1.3055         6.46E-48         6.31E-45         Up           20802         TRPA1         3.02274         6.46E-48         6.31E-45         Up           2081         GP377         2.365341         1.28E-42         1.13E         Up           2084         AMP73         2.36537         2.37E-43 </td <td>3569</td> <td>IL6</td> <td>-2.88615</td> <td>7.26E-60</td> <td>1.07E–58</td> <td>Down</td>	3569	IL6	-2.88615	7.26E-60	1.07E–58	Down
1413         DUSP'         -2.02740         4.88E-50         7.04E-58         Down           885         B7K         -1.89577         2.78E-56         3.86E-54         Down           865         BMP7         3.381864         1.49E-53         1.33E-62         Up           8670         S.7KA         3.702938         5.28E-53         0.34E-52         Up           2135         KDM68         -1.06663         1.07E-50         1.21E-49         Down           2135         KDM64         -1.06663         1.07E-50         1.21E-49         Down           2135         KDM7         1.014932         3.87E-48         4.77E-48         Up           1277         COL1A1         2.1395711         5.68E-46         5.88E-47         Down           12882         PLK1         -1.39851         8.48E-48         3.38E-44         Up           14151         M8         2.3028741         6.46E-46         6.38E-47         Up           2416         PM87         2.308311         1.28E-42         1.88E-41         Up           24161         MMP9         2.208231         1.28E-43         3.98E-44         Up           2417         A.88773         1.288433         5.	1906	EDN1	-2.08122	1.05E-59	1.55E-58	Down
BBS         BTK         -1.4957         2.755-56         3.655-55         Down           2113         CT51         -1.47924         3.465-54         4.375-53         Down           655         BKP7         3.5744         3.702938         5.235-53         6.345-52         Up           2135         KDM6B         -1.06633         1.075-50         1.215-49         Down           2353         FOS         -2.01248         1.115-49         4.475-48         Up           1277         COLIA1         2.153711         5.666-48         5.886-47         Up           1263         FLR3         -1.1855         6.465-46         6.318-47         Up           1263         FLR3         -2.362981         1.032-47         Up         Up           1263         FLR3         2.268541         1.032-47         Up           1264         GPR37         2.268541         1.032-42         2.086-41         Up           8282         SOC1         1.293357         2.37E-42         2.08E-41         Up           8244         AKR73         1.218841         1.04E-35         Down           100         ADA         1.615126         2.38E-36         S.06E-34         <	1843	DUSP1	-2.02746	4.88E-59	7.04E-58	Down
213         ETS1         -1.47924         3.49E-54         4.37E-53         Down           655         MM77         3.38184         1.48E-53         1.48E-52         Up           6770         STAR         3.702388         5.23E-53         6.34E-52         Up           23135         KDM68         -1.06683         1.07E-50         1.21E-49         Down           2353         FOS         -2.01246         1.11E-40         1.22E-48         Down           2353         FOS         -2.01246         1.11E-40         1.02E-47         Up           12632         PLK3         -1.13655         8.48E-48         8.37E-47         Up           12638         PLK3         -1.32651         1.08E-47         1.06E-46         Up           4151         M6         2.680749         3.55E-45         3.39E-44         Up           4381         MMP9         2.20829         7.27E-42         2.06E-41         Up           644         BNW2         1.213937         7.27E-42         2.06E-41         Up           644         BNW2         1.213937         7.27E-42         2.06E-41         Up           654         BNW2         1.213937         7.27E-42	695	BTK	-1.69577	2.75E-56	3.66E-55	Down
BSS         BMP7         3.381854         1.48E-53         1.58E-52         Up           6770         57AR         3.702938         5.23E-53         6.34E-62         Up           23135         KDM6B         -1.06663         1.07E-50         1.21E-48         Down           2353         FOS         -2.01246         1.11E-48         1.22E-48         Down           1719         DHF7         1.014932         3.87E-48         5.88E-47         Up           1283         PLK3         -1.30555         8.49E-48         6.37E-44         Up           12832         PLK3         -1.30555         8.49E-48         6.37E-44         Up           12882         DRF7         3.022744         6.46E-48         6.37E-44         Up           2481         DFR7         2.365341         1.28E-42         1.13E-41         Up           2681         OPR37         2.365341         1.28E-42         1.68E-41         Up           2644         ARFC3         2.282791         1.12E-40         9.34E-40         Up           2725         JW         -1.13933         5.76E-40         4.68E-38         Down           2726         JWP         -1.282833         3.48E-35	2113	ETS1	-1.47924	3.49E-54	4.37E-53	Down
Const         Const of the set of	655	BMP7	3 361854	1 49E-53	1 83F-52	Un
Dr/L         S/API         J/J02/58         J/J02/58         J/J02/58         J/J12         D/P           23135         K/DMKB         -1.06663         1.07E-60         1.21E-49         Down           2353         FOS         -2.01246         1.11E-49         1.22E-48         Down           1719         D/FR         1.01492         3.87E-48         4.17E-48         Up           1277         C.0LTAT         2.153711         5.66E-48         6.8EE-47         Down           120892         LRRX2         -2.58981         1.03E-47         1.06E-46         Up           120992         LRM2         -2.58981         1.03E-47         1.06E-46         Up           4151         MB         2.687459         3.55E-45         3.39E-44         Up           2861         GPR37         2.36531         1.28E-42         Up         1.4154.4         Up           2861         GPR37         2.36541         1.28E-42         2.08E-41         Up           2861         GPR37         2.362631         1.28E-43         Up         1.4164.3           2844         AKR/G2         2.287961         1.12E-40         4.84E-39         Down           9314         KLF4 </td <td>000</td> <td></td> <td>0.700000</td> <td>F. 00E . 50</td> <td>0.045 50</td> <td>0p</td>	000		0.700000	F. 00E . 50	0.045 50	0p
2315         KDM6B         -1.0663         1.07.5-0         1.21E-49         Down           2353         FOS         -2.01246         1.11E-49         1.22E-48         Down           11719         DH/R         1.01492         3.87E-49         4.17E-49         Up           1277         COL1A1         2.153711         5.66E-48         5.8E-47         Up           1263         PLK3         -1.13655         8.49E-48         6.3TE-46         Down           12690         TPR41         3.022744         6.46E-46         6.3TE-46         Up           4151         M6         2.68749         3.5E-45         3.38E-44         Up           6322         SDC1         1.293357         2.37E-42         2.08E-41         Up           644         BNR3         1.12840         4.36E-38         Up           6532         SDC1         1.293357         2.37E-42         2.08E-41         Up           6644         BNR3         1.218844         1.56E-41         1.41E-40         Up           7354         SDC3         -1.59754         7.77E-36         5.53E-35         Down           100         ADA         1.615126         2.36E-39         1.86E-38	6770	SIAR	3.702938	5.23E-53	6.34E-52	Up
2333         FOS         -2.01248         1.11E-49         1.2EE-48         Down           1719         DHFR         1.014892         3.87E-49         4.17E-48         Up           1277         COLIA1         2.153711         5.66E-48         5.86E-47         Up           1263         PLK3         -1.13655         8.49E-48         8.78E-47         Down           120892         LRRK2         -2.58981         1.38E-47         1.06E-46         Up           4316         MMP9         2.208629         4.79E-45         4.56E-44         Up           2861         ORRS7         2.268541         1.28E-42         1.13E-41         Up           6382         SDC1         1.293357         2.37E-42         2.08E-41         Up           644         BUR3         1.28844         1.48E-42         1.13E-41         Up           8644         AKR1C3         2.827931         1.12E-40         9.34E-40         Up           9314         KLF4         -1.68333         5.76E-40         4.68E-39         Down           1002         JUN         -1.13911         2.18E-35         1.09E-34         Down           10284         JUN         -1.53754         7.77E-36<	23135	KDM6B	-1.06663	1.07E-50	1.21E-49	Down
1719       DHFR       1.01492       3.87E-49       4.17E-48       Up         1277       COL.1A1       2.153711       5.66E-48       5.86E-47       Up         1283       PLK3       -1.13865       8.48E-48       8.76E-47       Down         12892       LRRA2       -2.58981       1.05E-47       1.06E-46       Down         12982       LRRA2       -2.58981       1.05E-47       4.56E-44       Up         4151       MB       2.66749       3.55E-45       3.36E-44       Up         6382       SDC1       1.293357       2.37E-42       2.06E-41       Up         664       BNR3       1.218644       1.65E-41       1.41E-40       Up         664       BNR3       1.218644       1.65E-41       1.41E-40       Up         8644       AKR17G3       2.627991       1.12E-40       9.34E-40       Up         9314       KLF4       -1.63933       S.76E-40       4.68E-38       Up         92725       JUN       -1.13911       2.18E-37       1.64E-36       Down         6648       SOD3       -1.53764       4.35E-35       Down       1.6524       Down         7356       SCGB1A1       -3.54	2353	FOS	-2.01246	1.11E-49	1.22E-48	Down
1277         COL1A1         2.153711         5.66E-48         5.86E-47         Up           12683         PLK3         -1.16655         8.49E-48         8.76E-47         Down           120892         LRRK2         -2.59891         1.03E-47         1.06E-46         Down           8059         TRPA1         3.022744         6.46E-46         6.31E-45         Up           4151         MB         2.20829         4.79E-45         3.36E-44         Up           8369         GPR37         2.365311         1.28E-42         1.13E-41         Up           864         BNP3         1.218684         1.65E-41         1.41E-40         Up           864         BNP3         1.218684         1.65E-41         1.41E-40         Up           864         BNP3         1.218644         1.65E-41         1.41E-40         Up           864         BNP3         1.218644         1.65E-41         0.00         0.00           9314         AKL74         -1.69333         5.67E-40         4.68E-39         Down           9375         JUN         -1.13911         2.18E-31         1.06E-34         Down           9364         ACD2         1.3553         1.53E-35	1719	DHFR	1.014932	3.87E-49	4.17E-48	Up
1263         PLK3        1.13655         8.49E-48         8.78E-47         Down           120992         LRRK2         -2.58981         1.03E-47         1.06E-46         Down           9898         TRPA1         3.02714         6.46E-46         6.31E-45         Up           4151         MB         2.667459         3.55E-45         3.98E-44         Up           2861         GPR37         2.365341         1.28E-42         1.13E-41         Up           6832         GDC1         1.293367         2.37E-42         2.06E-41         Up           6844         ARI73         2.37E-42         2.06E-41         Up           9314         KLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           9375         JUN         -1.139734         7.76E-40         4.68E-39         Down           10628         TXNP         -1.32833         1.54E-35         1.09E-34         Down           9356         SC081A1         -3.58406         4.33E-35         5.09E-34         Down           9358         AQP1         -2.13428         8.25E-35         5.6	1277	COL1A1	2.153711	5.66E-48	5.88E-47	Up
120892         LRRK2         -2.58981         1.05E-47         1.06E-46         Down           9889         TRPA1         3.022744         6.46E-46         6.31E-45         Up           4151         MB         2.687499         3.55E-45         3.38E-44         Up           4318         MMP9         2.20829         4.79E-45         4.56E-44         Up           6832         SDC1         1.293357         2.37E-42         2.06E-41         Up           664         BNIP3         1.21884         1.65E-41         1.41E-40         Up           9314         KLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.38E-33         1.88E-38         Up           9375         JJN         -1.13911         2.16E-37         1.48E-36         Down           6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           9386         JAOP1         -2.13283         1.44E-35         1.09E-34         Down           9386         SCGB1A1         -3.5806         6.17E-34         4.13E-33         Down           9386         JAOP1         -2.13285         6.17E-34	1263	PLK3	-1.13655	8.49E-48	8.78E-47	Down
Note         Note <th< td=""><td>120892</td><td>I BBK2</td><td>-2 58981</td><td>1 03E-47</td><td>1.06F-46</td><td>Down</td></th<>	120892	I BBK2	-2 58981	1 03E-47	1.06F-46	Down
Boses         IPPAP         S.J.22-44         B.ABC-46         B.S.J.E-45         J.J.           4151         MB         2.687459         3.55E-45         3.38E-44         Up           2861         GPR37         2.365341         1.28E-42         1.13E-41         Up           6832         S.DC1         1.289357         2.37E-42         2.08E-41         Up           684         BNIP3         1.218984         1.66E-41         1.41E-40         Up           8644         AKR1C3         2.827991         1.72E-40         9.34E-39         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           3725         JUN         -1.13911         2.18E-37         1.64E-36         Down           10628         TXNP         -1.32583         1.54E-35         1.09E-34         Down           356         AOP1         -2.13428         8.25E-35         5.66E-34         Down           558         AOP1         -2.13428         8.25E-35         1.09E-34         Down           558         AOP1         -2.13428         8.25E-35         0.66E-34         Down           558         AOP1         1.25641         1.55E-3	8080		2.000744			Lin
4151 <i>MAP</i> 2.26749         3.58E-45         3.38E-44         Up           4318 <i>MMP9</i> 2.20829         4.79E-45         4.56E-44         Up           6382 <i>SDC1</i> 1.293357         2.37E-42         2.08E-41         Up           684 <i>BNP3</i> 1.21884         1.65E-41         1.41E-40         Up           864 <i>BNP3</i> 1.21884         1.65E-41         1.41E-40         Up           864 <i>BNP3</i> 1.21883         5.76E-40         9.34E-40         Up           9314 <i>KLF4</i> -1.69333         5.76E-40         4.68E-39         Down           9100 <i>ADA</i> 1.615126         2.36E-39         1.84E-36         Down           9252         JUN         -1.13911         2.18E-37         1.64E-36         Down           9368 <i>ADP1</i> -1.35633         1.54E-35         5.68E-34         Down           9369 <i>SCB1A1</i> -3.58406         4.32E-35         5.68E-34         Down           9364 <i>ADP1</i> -1.37665         6.17E-34         4.13E-33         Down           9364 <i>ADP1</i> -1.37665	0909	IRPAI	3.022744	0.40E-40	0.31E-45	Up
4318         MMP9         2.208329         4.78E-45         4.56E-44         Up           2861         GPR37         2.305341         1.28E-42         1.13E-41         Up           6382         SDC1         1.233357         2.37E-42         2.08E-41         Up           8644         AKR1C3         2.827991         1.12E-40         9.34E-40         Up           9314         KLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           3725         JUN         -1.13911         2.18E-37         1.64E-35         Down           6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           10628         TXNP         -1.32663         1.64E-35         1.09E-34         Down           358         AQP1         -2.13428         8.25E-35         5.69E-34         Down           63361         NCF1         -1.137665         6.17E-34         4.13E-33         Down           7285         TXN         1.215444         1.55E-32         9.44E-32         Up           7295         TXN         1.215E-43         1.47E-33	4151	MB	2.687459	3.55E-45	3.39E-44	Up
2881         GPR37         2.365341         1.28E-42         1.13E-41         Up           6382         SDC1         1.293367         2.37E-42         2.06E-41         Up           664         BNIP3         1.218884         1.65E-41         1.41E-40         Up           8644         AKR103         2.827991         1.12E-40         9.34E-40         Up           914         ALLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.36E-39         1.84E-36         Down           3725         JUN         -1.13911         2.18E-37         1.64E-36         Down           10628         TX/NP         -1.32583         1.54E-35         1.09E-34         Down           358         AOP1         -2.13428         8.25E-35         5.69E-34         Down           358         AOP1         -2.13428         8.25E-35         5.69E-34         Down           7226         TRPM2         1.172667         5.29E-33         3.43E-32         Up           140885         SIRPA         -1.09725         1.64E-32         2.94E-32         Up           28310         HAF         1.169726         3.39E	4318	MMP9	2.208829	4.79E-45	4.56E-44	Up
6382         SDC1         1.293357         2.37E-42         2.08E-41         Up           664         BNIP3         1.218884         1.66E-41         1.11E-40         Up           8644         AKR1C3         2.827991         1.12E-40         9.34E-40         Up           9314         KLF4         -1.69333         5.76E-40         4.86E-38         Up           9314         MADA         1.615126         2.96E-39         1.88E-38         Down           96649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           7356         SCGB1A1         -3.89406         4.33E-35         3.02E-34         Down           958         AQP1         -2.13428         8.25E-35         5.68E-34         Down           958         JNN         1.215444         1.55E-32         9.84E-32         Up           140885         SIRPA         -1.09725         1.64E-3	2861	GPR37	2.365341	1.28E-42	1.13E-41	Up
664         BNIP3         1.21884         1.65E-41         1.41E-40         Up           8644         AKR1C3         2.82791         1.12E-40         9.34E-40         Up           9314         KLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           3725         JUN         -1.13911         2.18E-37         1.645E-36         Down           10628         JUN         -1.13911         2.18E-37         1.65E-36         Down           10628         JUN         -1.39764         7.77E-36         5.65E-34         Down           10528         JUN         -1.32683         1.64E-35         3.02E-34         Down           558         AOP1         -2.13428         8.25E-35         5.69E-34         Down           65361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7226         TRPM2         1.172667         5.29E-33         3.48E-32         Up           140865         SIRPA         -1.09725         1.64E-32         2.81E-31         Down           558         AVL         -1.17266         4.87E	6382	SDC1	1.293357	2.37E-42	2.08E-41	Up
8444         AKR1C3         2.827991         1.12E-40         9.34E-40         Up           9314         KLF4         -1.69333         5.76E-40         4.68E-39         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           3725         JUN         -1.13911         2.18E-37         1.64E-36         Down           6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           10628         TXNP         -1.32883         1.54E-35         1.09E-34         Down           358         AQP1         -2.13428         8.25E-35         5.69E-34         Down           563361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7226         TRN         1.122667         5.29E-33         3.45E-32         Up           140885         SIRPA         -1.09725         1.64E-32         2.81E-31         Down           584         AXL         -1.17266         4.48E-32         2.81E-31         Down           583120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC811         -1.14853         1	664	BNIP3	1.218884	1.65E-41	1.41E-40	Up
1.1.11.1.1.11.1.1.1.11.1.1.11.1.11.1.11.1.1100 $ADA$ 1.6151262.36E-391.86E-38Up3725 $JUN$ -1.139112.18E-371.64E-36Down6649 $SOD3$ -1.597547.77E-365.53E-35Down10628 $TXNP$ -1.325831.54E-351.09E-34Down7356 $SCGB1A1$ -3.584064.33E-353.02E-34Down558 $AOP1$ -2.134288.25E-355.69E-34Down653361 $NCF1$ -1.376656.17E-344.13E-33Down558 $AOP1$ -2.134288.25E-353.04E-32Up140885 $TXN$ 1.2154441.55E-329.84E-32Up140885 $TXN$ 1.2154441.55E-329.84E-32Up140885 $SIRPA$ -1.072664.48E-322.81E-31Down283120H192.9236384.87E-312.94E-30Up558 $AXL$ -1.172664.48E-322.81E-31Down888 $RHOB$ -1.11992.88E-261.47E-25Down3934 $LCN2$ 1.9976593.39E-241.61E-23Up8807 $IL18RAP$ -1.227216.63E-232.98E-22Down8877 $SEN3$ 1.166162.55E-199.93E-19Up143686 $SESN3$ 1.166182.55E-199.93E-19Up143686 $SESN3$ 1.166182.55E-199.93E-19Up143686	8644	AKB1C3	2.827991	1.12E-40	9.34F-40	Up
Shi A         ALP 4         -1.0503 - 0.102-05         0.102-05         Down           100         ADA         1.615126         2.36E-39         1.88E-38         Up           3725         JUN         -1.19911         2.18E-37         1.64E-36         Down           16649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           16628         TXNIP         -1.32583         1.54E-35         1.09E-34         Down           558         SCGB1A1         -3.58406         4.33E-35         3.02E-34         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7256         TRPM2         1.172667         5.29E-33         3.43E-32         Up           7286         TRPM2         1.172667         5.29E-33         3.43E-32         Up           140885         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           588         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14953         1.55E-29<	0214	KIEA	1 60222	5 765 40	4.685 30	Down
100         ADA         1.615126         2.36E-39         1.88E-38         0p           3725         JUN         -1.13911         2.18E-37         1.64E-36         Down           6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           10628         TXNIP         -1.32583         1.54E-35         1.09E-34         Down           356         SCGB1A1         -5.58406         4.33E-35         3.02E-34         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7226         TRPM2         1.172667         5.29E-33         3.43E-32         Up           140885         SIRPA         -1.09725         1.64E-32         2.81E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14953         1.55E-29         8.90E-29         Down           3834         LCN2         1.997659	9014	KEF4	-1.09333	5.70L-40	4.002-09	Down
3725         JUN         -1.13911         2.18E-37         1.64E-36         Down           6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           10628         TXNIP         -1.32583         1.54E-35         1.09E-34         Down           358         SCGB1A1         -3.58406         4.33E-35         3.02E-34         Down           653361         NCF1         -2.13428         8.25E-35         5.69E-34         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-32         Up           7295         TXN         1.215444         1.55E-32         9.48E-32         Up           140885         SIRPA         -1.09725         1.64E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           988         RH0B         -1.199         2.88E-26         1.47E-25         Down           9867         LCN2         1.997659         3.99E-24         1.61E-23         Up           98807         LCN2         1.997659	100	ADA	1.615126	2.36E-39	1.88E-38	Up
6649         SOD3         -1.59754         7.77E-36         5.53E-35         Down           10628         TXNP         -1.32583         1.54E-35         1.08E-34         Down           356         SC6B1A1         -3.58406         4.33E-35         3.02E-34         Down           358         AQP1         -2.13428         8.25E-35         5.69E-34         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7226         TRPM2         1.172667         5.29E-33         3.48E-32         Up           7295         TXN         1.215444         1.55E-32         9.84E-32         Up           140885         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.929338         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RHOB         -1.1199         2.88E-26         1.47E-25         Down           3082         HGF         -1.39694 <t< td=""><td>3725</td><td>JUN</td><td>-1.13911</td><td>2.18E-37</td><td>1.64E-36</td><td>Down</td></t<>	3725	JUN	-1.13911	2.18E-37	1.64E-36	Down
10628 $TXNP$ -1.325831.54E-351.09E-34Down7356 $SCGB1A1$ -3.584064.33E-353.02E-34Down558 $AQP1$ -2.134288.25E-355.69E-34Down653361 $NCF1$ -1.376656.17E-344.13E-33Down7226 $TRPM2$ 1.1726675.29E-333.43E-32Up7295 $TXN$ 1.2154441.55E-329.84E-32Up140885 $SIRPA$ -1.097251.64E-321.04E-31Down558 $AXL$ -1.172664.48E-322.81E-31Down283120H192.9236384.87E-312.94E-30Up6546 $SLC8A1$ -1.148531.55E-298.90E-29Down388 $RHOB$ -1.11992.88E-261.47E-25Down3934 $LCN2$ 1.9976593.39E-241.61E-23Up8807 $IL18RAP$ -1.227216.63E-232.98E-22Down3082 $HGF$ -1.396942.17E-229.51E-22Down4541 $ND6$ -1.140737.89E-203.14E-19Up143666 $SESN3$ 1.166162.55E-199.93E-19Up1571 $CYP2E1$ 1.4212265.14E-191.98E-18Up576 $PAX2$ 2.8119373.02E-159.84E-15Up5776 $PAX2$ 2.8119373.02E-159.84E-15Up578 $MPO$ -1.053485.04E-141.56E-13Down2833 $GPR37L$	6649	SOD3	-1.59754	7.77E-36	5.53E-35	Down
7366 $SCGB1A1$ $-3.58406$ $4.33E-35$ $3.02E-34$ Down $358$ $AQP1$ $-2.13428$ $8.25E-35$ $5.69E-34$ Down $653361$ $NCF1$ $-1.37665$ $6.17E-34$ $4.13E-33$ Down $7226$ $TRPM2$ $1.172667$ $5.29E-33$ $3.43E-32$ Up $7295$ $TXN$ $1.215444$ $1.55E-32$ $9.84E-32$ Up $140885$ $SIRPA$ $-1.09725$ $1.64E-32$ $2.81E-31$ Down $2584$ $AXL$ $-1.17266$ $4.48E-32$ $2.81E-31$ Down $283120$ $H19$ $2.923638$ $4.87E-31$ $2.94E-30$ Up $6546$ $SLC8A1$ $-1.14853$ $1.55E-29$ $8.90E-29$ Down $388$ $RHOB$ $-1.1199$ $2.88E-26$ $1.47E-25$ Down $3934$ $LCN2$ $1.997659$ $3.39E-24$ $1.61E-23$ Up $807$ $LL18RAP$ $-1.22721$ $6.63E-23$ $2.98E-22$ Down $3082$ $HGF$ $-1.39694$ $2.17E-22$ $9.51E-22$ Down $4541$ $ND6$ $-1.14073$ $7.89E-20$ $3.14E-19$ Down $877$ $SPHK1$ $1.14554$ $2.17E-19$ $8.50E-19$ Up $143686$ $SESN3$ $1.1616$ $2.55E-19$ $9.93E-19$ Up $1571$ $CYP2E1$ $1.421226$ $5.14E-19$ $9.98E-18$ Up $5076$ $PAX2$ $2.811937$ $3.02E-15$ $9.84E-15$ Up $4353$ $MPO$ $-1.05348$ $5.04E-14$ $1.56E-$	10628	TXNIP	-1.32583	1.54E-35	1.09E-34	Down
958         AQP1         -2.13428         8.25E-35         5.69E-34         Down           653361         NCF1         -1.37665         6.17E-34         4.13E-33         Down           7226         TRPM2         1.172667         5.29E-33         3.43E-32         Up           7295         TXN         1.215444         1.55E-32         9.84E-32         Up           140865         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RH0B         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           6807         L18RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-29         9.51E-22         Down           4501         ND6         -1.14073         7.	7356	SCGB1A1	-3.58406	4.33E-35	3.02E-34	Down
1.	358	AQP1	-2.13428	8.25E-35	5.69E-34	Down
Cossol         Ref /         F1.07003         C. // F2.34         F1.0503         C. // F2.34         F1.0503         Down           7226         TRPM2         1.172667         5.29E-33         3.43E-32         Up           7295         TXN         1.215444         1.55E-32         9.84E-32         Up           140885         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RHOB         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           8807         I.118RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-12         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Up           1436866	653361		1 37665	6.17E 34	4 12E 22	Down
$I = 2 + 0$ $I + 1 + 2 + 0$ $5 + 2 + 3 - 3$ $3 + 3 + 3 - 3 - 2$ $U p$ $7295$ $T XN$ $1 + 2 + 5 + 4 + 4$ $1 + 5 - 3 - 2$ $9 + 8 + - 3 - 2$ $U p$ $140885$ $S I R P A$ $-1 \cdot 09725$ $1 + 6 - 3 - 2$ $1 + 0 - 3 + 1$ $D own$ $558$ $A XL$ $-1 + 17266$ $4 + 48 - 3 - 2$ $2 + 8 + -3 + 1$ $D own$ $283120$ $H 19$ $2 + 92 + 3 - 3 + 3$ $U p$ $U p$ $6546$ $S L C 8 + 1$ $-1 + 14 + 5 - 3$ $1 + 5 - 2 - 9$ $8 + 90 - 2 - 9$ $D own$ $388$ $R H O B$ $-1 + 14 + 5 - 3$ $1 + 5 - 2 - 9$ $8 + 90 - 2 - 9$ $D own$ $3934$ $L C N 2$ $1 + 99765 - 9$ $3 + 3 - 2 - 2$ $D own$ $3934$ $L C N 2$ $1 + 99765 - 9$ $3 + 3 - 2 - 2$ $D own$ $3934$ $L C N 2$ $1 + 99765 - 9$ $3 + 3 - 2 - 2$ $D own$ $3934$ $L C N 2$ $1 + 99765 - 9$ $3 + 2 - 2 - 3$ $U p$ $807$ $I L 18 R A P$ $-1 + 272 - 1 - 6 + 6 - 2 - 3$ $2 + 8 - 2 - 2$ $D own$ $3082$ $H G F$ $-1 + 3969 + 4 - 2 + 7 - 2 - 9 + 5 - 2 - 2$ $D own$ $4541$ $N D 6$ $-1 + 1407 - 3$ $7 + 8 - 2 - 3 - 3 - 2 - 3 - 2 - 3 - 2 - 3 - 3$	7006		- 1.07000			LU-
7295         7XN         1.215444         1.55E-32         9.84E-32         Up           140885         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RHOB         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           8807         IL18RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.145564         2.17E-19         8.50E-19         Up           143686         SESN3         1.16616         2.55E-19         9.38E-15         Up           5076         PAX2         2.811937         3.	7226	TRPM2	1.1/2667	5.29E-33	3.43E-32	Up
140885         SIRPA         -1.09725         1.64E-32         1.04E-31         Down           558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RHOB         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           8807         IL18RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           3082         HGF         -1.39694         2.17E-12         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.145564         2.17E-19         8.50E-19         Up           1571         CYP2E1         1.421226         5.14E-19         1.98E-18         Up           5076         PAX2         2.811937	7295	TXN	1.215444	1.55E-32	9.84E-32	Up
558         AXL         -1.17266         4.48E-32         2.81E-31         Down           283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RHOB         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           8807         IL18RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.16564         2.17E-19         8.50E-19         Up           143686         SESN3         1.16616         2.55E-19         9.39E-19         Up           1571         CYP2E1         1.421226         5.14E-19         1.98E-18         Up           5076         PAX2         2.811937         3.02E-15         9.84E-15         Up           4353         MPO         -1.05348         5.04E-	140885	SIRPA	-1.09725	1.64E-32	1.04E-31	Down
283120         H19         2.923638         4.87E-31         2.94E-30         Up           6546         SLC8A1         -1.14853         1.55E-29         8.90E-29         Down           388         RH0B         -1.1199         2.88E-26         1.47E-25         Down           3934         LCN2         1.997659         3.39E-24         1.61E-23         Up           8807         I.18RAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.145564         2.17E-19         8.50E-19         Up           143686         SESN3         1.16616         2.55E-19         9.93E-19         Up           1571         CYP2E1         1.421226         5.14E-19         1.98E-18         Up           5076         PAX2         2.811937         3.02E-15         9.84E-15         Up           4353         MPO         -1.05348         5.04E-14         1.56E-13         Down           7225         TRPC6         -1.10913         1.	558	AXL	-1.17266	4.48E-32	2.81E-31	Down
6546SLC8A1-1.148531.55E-298.90E-29Down388RHOB-1.11992.88E-261.47E-25Down3934LCN21.9976593.39E-241.61E-23Up8807IL18RAP-1.227216.63E-232.98E-22Down3082HGF-1.396942.17E-229.51E-22Down4541ND6-1.140737.89E-203.14E-19Down8877SPHK11.1455642.17E-198.50E-19Up143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Up9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	283120	H19	2.923638	4.87E-31	2.94E-30	Up
388 <i>RHOB</i> -1.1199         2.88E-26         1.47E-25         Down           3934 <i>LCN2</i> 1.997659         3.39E-24         1.61E-23         Up           8807 <i>IL18RAP</i> -1.22721         6.63E-23         2.98E-22         Down           3082 <i>HGF</i> -1.39694         2.17E-22         9.51E-22         Down           4541 <i>ND6</i> -1.14073         7.89E-20         3.14E-19         Down           8877 <i>SPHK1</i> 1.145564         2.17E-19         8.50E-19         Up           143686 <i>SESN3</i> 1.16616         2.55E-19         9.93E-19         Up           1571 <i>CYP2E1</i> 1.421226         5.14E-19         1.98E-18         Up           5076 <i>PAX2</i> 2.811937         3.02E-15         9.84E-15         Up           4353 <i>MPO</i> -1.05348         5.04E-14         1.56E-13         Down           7225 <i>TRPC6</i> -1.10913         1.18E-13         3.61E-13         Down           9283 <i>GPR37L1</i> 1.116013         1.37E-13         4.16E-13         Up           1956 <i>EGFR</i> 1.	6546	SLC8A1	-1.14853	1.55E-29	8.90E-29	Down
3934LCN21.9976593.39E-241.61E-23Up8807IL18RAP-1.227216.63E-232.98E-22Down3082HGF-1.396942.17E-229.51E-22Down4541ND6-1.140737.89E-203.14E-19Down8877SPHK11.1455642.17E-198.50E-19Up143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Down9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	388	RHOR	_1 1199	2 88E-26	1 47F-25	Down
3834LUN21.9976993.39E-241.61E-23Up8807IL18RAP-1.227216.63E-232.98E-22Down3082HGF-1.396942.17E-229.51E-22Down4541ND6-1.140737.89E-203.14E-19Down8877SPHK11.1455642.17E-198.50E-19Up143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Down9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	2024		-1.1133		1.77L-2J	LL-
BBU/         IL18BAP         -1.22721         6.63E-23         2.98E-22         Down           3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.145564         2.17E-19         8.50E-19         Up           143686         SESN3         1.16616         2.55E-19         9.93E-19         Up           1571         CYP2E1         1.421226         5.14E-19         1.98E-18         Up           5076         PAX2         2.811937         3.02E-15         9.84E-15         Up           4353         MPO         -1.05348         5.04E-14         1.56E-13         Down           7225         TRPC6         -1.10913         1.18E-13         3.61E-13         Down           9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	0007		600,6661	J.J9E-24	1.01E-23	υp
3082         HGF         -1.39694         2.17E-22         9.51E-22         Down           4541         ND6         -1.14073         7.89E-20         3.14E-19         Down           8877         SPHK1         1.145564         2.17E-19         8.50E-19         Up           143686         SESN3         1.16616         2.55E-19         9.93E-19         Up           1571         CYP2E1         1.421226         5.14E-19         1.98E-18         Up           5076         PAX2         2.811937         3.02E-15         9.84E-15         Up           4353         MPO         -1.05348         5.04E-14         1.56E-13         Down           7225         TRPC6         -1.10913         1.18E-13         3.61E-13         Down           9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	8807	IL18RAP	-1.22721	6.63E-23	2.98E-22	Down
4541ND6-1.140737.89E-203.14E-19Down8877SPHK11.1455642.17E-198.50E-19Up143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Down9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	3082	HGF	-1.39694	2.17E-22	9.51E-22	Down
8877SPHK11.1455642.17E-198.50E-19Up143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Down9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	4541	ND6	-1.14073	7.89E-20	3.14E-19	Down
143686SESN31.166162.55E-199.93E-19Up1571CYP2E11.4212265.14E-191.98E-18Up5076PAX22.8119373.02E-159.84E-15Up4353MPO-1.053485.04E-141.56E-13Down7225TRPC6-1.109131.18E-133.61E-13Down9283GPR37L11.1160131.37E-134.16E-13Up1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	8877	SPHK1	1.145564	2.17E-19	8.50E-19	Up
1571       CYP2E1       1.421226       5.14E-19       1.98E-18       Up         5076       PAX2       2.811937       3.02E-15       9.84E-15       Up         4353       MPO       -1.05348       5.04E-14       1.56E-13       Down         7225       TRPC6       -1.10913       1.18E-13       3.61E-13       Down         9283       GPR37L1       1.116013       1.37E-13       4.16E-13       Up         1956       EGFR       1.040976       1.89E-13       5.72E-13       Up         337       APOA4       2.430688       2.15E-05       4.15E-05       Up	143686	SESN3	1.16616	2.55E-19	9.93E-19	Up
5076     PAX2     2.811937     3.02E-15     9.84E-15     Up       4353     MPO     -1.05348     5.04E-14     1.56E-13     Down       7225     TRPC6     -1.10913     1.18E-13     3.61E-13     Down       9283     GPR37L1     1.116013     1.37E-13     4.16E-13     Up       1956     EGFR     1.040976     1.89E-13     5.72E-13     Up       337     APOA4     2.430688     2.15E-05     4.15E-05     Up	1571		1 421226	5 1/F_10	1 08F_18	- <del>-</del>
DOTO         PAX2         2.811937         3.02E-15         9.84E-15         Up           4353         MPO         -1.05348         5.04E-14         1.56E-13         Down           7225         TRPC6         -1.10913         1.18E-13         3.61E-13         Down           9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	5076		0.011007			
4353         MPO         -1.05348         5.04E-14         1.56E-13         Down           7225         TRPC6         -1.10913         1.18E-13         3.61E-13         Down           9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	50/6	PAX2	2.811937	3.02E-15	9.84E-15	Up
7225         TRPC6         -1.10913         1.18E-13         3.61E-13         Down           9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	4353	MPO	-1.05348	5.04E-14	1.56E-13	Down
9283         GPR37L1         1.116013         1.37E-13         4.16E-13         Up           1956         EGFR         1.040976         1.89E-13         5.72E-13         Up           337         APOA4         2.430688         2.15E-05         4.15E-05         Up	7225	TRPC6	-1.10913	1.18E–13	3.61E-13	Down
1956EGFR1.0409761.89E-135.72E-13Up337APOA42.4306882.15E-054.15E-05Up	9283	GPR37L1	1.116013	1.37E-13	4.16E-13	Up
337 APOA4 2.430688 2.15E–05 4.15E–05 Up	1956	EGFR	1.040976	1.89E-13	5.72E-13	Up
	337	APOA4	2.430688	2.15E-05	4.15E-05	Up

 $\ensuremath{\mathsf{OS}}\xspace$  -DEGs, oxidative stress-related differentially expressed genes.

© AME Publishing Company.

Gene	P value	P <sub>adj</sub>
PD-1	0.88	>0.99
PD-L1	0.001	0.03
PD-L2	0.002	0.07
CTLA4	0.02	0.59
CD80	0.08	>0.99
CD86	0.56	>0.99
CD28	<0.001	<0.001
CD112	0.13	>0.99
CD155	<0.001	<0.001
TIGIT	0.03	>0.99
CD27	<0.001	<0.001
CD134	0.18	>0.99
ТІМЗ	0.69	>0.99
LAG3	0.03	>0.99
BTLA	<0.001	<0.001
CD160	<0.001	<0.001
CDK4	<0.001	<0.001
FOXP3	0.75	>0.99
FAS	0.89	>0.99
CD40L	<0.001	<0.001
CD244	<0.001	0.03
CD137	0.001	0.04
FASL	0.20	>0.99
CD270	<0.001	<0.001
B7H3	<0.001	<0.001
B7H4	0.97	>0.99
B7H5	0.90	>0.99
ICOSL	0.06	>0.99
GEM	<0.001	<0.001
CD134L	<0.001	<0.001
CD137L	<0.001	0.002
CD48	<0.001	<0.001
IDO1	0.16	>0.99
CD83	<0.001	0.004

ICI, immune checkpoint inhibitor.



Figure S1 Protein-protein interaction network. The interactions among the candidate genes were explored using the registration information in the STRING database. Outliers without connections were removed.



**Figure S2** Analysis of model gene expression, and GSVA of GO. (A) The expression levels of 11 prognostic OS-DEGs were visualized. (B) Correlation analysis of the 11 model genes. (C) GSVA for GO BPs. (D) GSVA for GO CCs. (E) GSVA for GO MFs. Pathways significantly activated in the high-risk group are represented in red, while those significantly activated in the low-risk group are shown in blue, and the groups with non-significant expression are represented in black. GSVA, gene set variation analysis; GO, Gene Ontology; OS, oxidative stress; DEG, differentially expressed gene; BP, biological process; CC, cellular component; MF, molecular function; FC, fold change.



Figure S3 Organoid drug sensitivity test. Organoid drug sensitivity test with high- or low-risk patients showing the microscopic findings before and after treatment with drugs. Image magnification of 10×.



**Figure S4** Immune cell analysis. (A) Stacking plot map of immune cells; CIBERSORT was used to analyze the infiltration of 22 kinds of immune cells. (B) Heatmap of 22 immune cell infiltrates in the samples analyzed by CIBERSORT. (C) The correlation between immune cells as analyzed by CIBERSORT.



**Figure S5** qRT-PCR. Expression level of OS-related genes in tumor samples of NSCLC and adjacent control normal samples. The messenger RNA values were normalized by the expression of the housekeeping gene GAPDH. qRT-PCR, quantitative real-time polymerase chain reaction; OS, oxidative stress; NSCLC, non-small cell lung cancer; GAPDH, glyceraldehyde-3-phosphate dehydrogenase.



**Figure S6** Multiple immunofluorescence staining of high- and low-risk NSCLC specimens. (A-C) CD20<sup>+</sup> cells were highly expressed in the low-risk group compared with the high-risk group. (D-F) FAP<sup>+</sup> cells were highly expressed in the high-risk group compared with the low-risk group. (G-I) PD-L1<sup>+</sup> cells were highly expressed in the low-risk group compared with the high-risk group. (J-L) Merge of CD20<sup>+</sup>, FAP<sup>+</sup>, and PD-L1 immunofluorescence staining. \*, P<0.05; \*\*, P<0.01. NSCLC, non-small cell lung cancer. The organoids were stained with propidium iodide (red indicating dead cells), and calcein (green indicating live cells). Image magnification of 10×.



**Figure S7** Multiple immunofluorescence staining of macrophages in high- and low-risk NSCLC specimens. (A-C) CD68<sup>+</sup> cells were highly expressed in the high-risk group compared with the low-risk group. (D-F) CD163<sup>+</sup> cells were highly expressed in the high-risk group compared with the low-risk group. (H-I) There was no significant difference in the CD86<sup>+</sup> cells between the high-risk group and the low-risk group. (J-L) Merge of CD68<sup>+</sup>, CD163<sup>+</sup> and CD86<sup>+</sup> cell immunofluorescence staining. \*, P<0.05, NS, not significant. NSCLC, non-small cell lung cancer. The organoids were stained with propidium iodide (red indicating dead cells), and calcein (green indicating live cells). Image magnification of 10×.