

## Supplementary

**Table S1** Differentially expressed isoforms in the N vs. T comparison group

Transcript name	log2FC (T/N)	log2FC (N/T)	P value	FDR	Upregulation/downregulation (T4/N2)
MMP11-001	6.29	-6.29	5.00E-05	0.03	Upregulation
ZNF259-001	4.1	-4.1	5.00E-05	0.03	Upregulation
REG1A-001	4.36	-4.36	5.00E-05	0.03	Upregulation
EPYC-001	1.55	-1.55	5.00E-05	0.03	Upregulation
SMARCB1-001	3.82	-3.82	5.00E-05	0.03	Upregulation
PELP1-201	-5.28	5.28	5.00E-05	0.03	Downregulation
DKK2-001	2.11	-2.11	5.00E-05	0.03	Upregulation
SLC6A1-001	2.47	-2.47	5.00E-05	0.03	Upregulation
ITIH5-003	2.77	-2.77	5.00E-05	0.03	Upregulation
ATOH1-001	1.4	-1.4	5.00E-05	0.03	Upregulation
MRGPRF-001	3.85	-3.85	5.00E-05	0.03	Upregulation
CFD-201	-5.89	5.89	5.00E-05	0.03	Downregulation
SEMA4B-002	3.5	-3.5	5.00E-05	0.03	Upregulation
NASP-005	5.31	-5.31	5.00E-05	0.03	Upregulation
STMN1-003	6.29	-6.29	5.00E-05	0.03	Upregulation
FAM150A-001	1.92	-1.92	5.00E-05	0.03	Upregulation
RRBP1-001	4.48	-4.48	5.00E-05	0.03	Upregulation
ATP1A1-202	6.15	-6.15	5.00E-05	0.03	Upregulation
GLO1-001	5.63	-5.63	5.00E-05	0.03	Upregulation
LYPLA2-201	5.97	-5.97	5.00E-05	0.03	Upregulation
HNRNPK-203	-4.88	4.88	5.00E-05	0.03	Downregulation
OTUD5-004	4.47	-4.47	5.00E-05	0.03	Upregulation
AC021218.2-001	1.65	-1.65	5.00E-05	0.03	Upregulation
FLII-201	3.8	-3.8	5.00E-05	0.03	Upregulation
TRABD-003	3.09	-3.09	5.00E-05	0.03	Upregulation
SNORA72-201	5.51	-5.51	5.00E-05	0.03	Upregulation
IGLV4-60-001	2.99	-2.99	5.00E-05	0.03	Upregulation
IGHA2-001	-5.69	5.69	5.00E-05	0.03	Downregulation
ZNF295-006	1.51	-1.51	5.00E-05	0.03	Upregulation
HDLBP-201	5.01	-5.01	5.00E-05	0.03	Upregulation
RP11-505P4.7-001	-1.88	1.88	5.00E-05	0.03	Downregulation
LCA5L-018	-1.51	1.51	5.00E-05	0.03	Downregulation
AP001434.2-001	1.91	-1.91	5.00E-05	0.03	Upregulation
RP11-40H20.2-001	2.33	-2.33	5.00E-05	0.03	Upregulation
MEF2D-003	2.72	-2.72	5.00E-05	0.03	Upregulation
DDX56-006	4.58	-4.58	5.00E-05	0.03	Upregulation
ELF3-010	7.74	-7.74	5.00E-05	0.03	Upregulation
RPL29-009	-10.39	10.39	5.00E-05	0.03	Downregulation
DES-007	-2.34	2.34	5.00E-05	0.03	Downregulation
SPARC-002	8.46	-8.46	5.00E-05	0.03	Upregulation
HSPA8-010	7.77	-7.77	5.00E-05	0.03	Upregulation
DAD1-006	-7.58	7.58	5.00E-05	0.03	Downregulation
LTA4H-009	-5.77	5.77	5.00E-05	0.03	Downregulation
COL17A1-201	1.71	-1.71	5.00E-05	0.03	Upregulation
SERPINB1-202	5.03	-5.03	5.00E-05	0.03	Upregulation
IDH2-003	5.53	-5.53	5.00E-05	0.03	Upregulation
PDXDC1-004	4.43	-4.43	5.00E-05	0.03	Upregulation

FDR, false discovery rate; N, normal group; T, Tumour group.

**Table S2** Differentially expressed isoforms in the DM-N vs. DM-T comparison group

Transcript name	log2FC (DM-T/DM-N)	log2FC (DM-N/DM-T)	P value	FDR	Upregulation/downregulation (DM-T/DM-N)
SGCG-001	-1.109193378	1.109193378	5.00E-05	0.0337658	Downregulation
FGF23-001	0.81775422	-0.81775422	5.00E-05	0.0337658	Upregulation
EGR1-001	-5.198078517	5.198078517	5.00E-05	0.0337658	Downregulation
HOXC11-002	1.100755678	-1.100755678	5.00E-05	0.0337658	Upregulation
IGJ-001	-7.458829957	7.458829957	5.00E-05	0.0337658	Downregulation
SLC5A7-001	-2.799472802	2.799472802	5.00E-05	0.0337658	Downregulation
KRT24-001	-2.145879581	2.145879581	5.00E-05	0.0337658	Downregulation
SMYD1-201	-1.780473889	1.780473889	5.00E-05	0.0337658	Downregulation
CTAG1B-002	3.033075832	-3.033075832	5.00E-05	0.0337658	Upregulation
MAGEA11-001	2.884023464	-2.884023464	5.00E-05	0.0337658	Upregulation
PDLIM7-001	3.43445476	-3.43445476	5.00E-05	0.0337658	Upregulation
PIGR-001	-5.999212681	5.999212681	5.00E-05	0.0337658	Downregulation
CSAG3-201	4.191752134	-4.191752134	5.00E-05	0.0337658	Upregulation
MAGEA12-001	4.121363596	-4.121363596	5.00E-05	0.0337658	Upregulation
CTAG2-002	6.359854959	-6.359854959	5.00E-05	0.0337658	Upregulation
MAGEA2B-001	3.56126503	-3.56126503	5.00E-05	0.0337658	Upregulation
VGLL1-001	1.875312192	-1.875312192	5.00E-05	0.0337658	Upregulation
CXorf61-001	3.878558603	-3.878558603	5.00E-05	0.0337658	Upregulation
SSX4B-001	3.260329825	-3.260329825	5.00E-05	0.0337658	Upregulation
MAGEB2-001	3.345509924	-3.345509924	5.00E-05	0.0337658	Upregulation
IGKV1D-13-001	-3.569381719	3.569381719	5.00E-05	0.0337658	Downregulation
IGLC2-001	-5.965995712	5.965995712	5.00E-05	0.0337658	Downregulation
IGLC3-001	-6.956741988	6.956741988	5.00E-05	0.0337658	Downregulation
IGHV3-49-001	-5.603130774	5.603130774	5.00E-05	0.0337658	Downregulation
KRTAP13-2-001	-3.152855114	3.152855114	5.00E-05	0.0337658	Downregulation
RP11-124L5.7-001	0.86904226	-0.86904226	5.00E-05	0.0337658	Upregulation
SH3BGR-010	1.962267675	-1.962267675	5.00E-05	0.0337658	Upregulation
LBR-007	1.14185782	-1.14185782	5.00E-05	0.0337658	Upregulation
LINC00323-002	-1.297584692	1.297584692	5.00E-05	0.0337658	Downregulation
RP11-543D5.1-001	3.593712308	-3.593712308	5.00E-05	0.0337658	Upregulation
POU6F2-001	2.931240538	-2.931240538	5.00E-05	0.0337658	Upregulation
TPT1-AS1-016	1.337208701	-1.337208701	5.00E-05	0.0337658	Upregulation
MYH11-014	-1.208741981	1.208741981	5.00E-05	0.0337658	Downregulation
AC009133.21-001	-4.738573303	4.738573303	5.00E-05	0.0337658	Downregulation

DM-N, diabetes mellitus-normal; DM-T, diabetes mellitus-tumour; FDR, false discovery rate.

**Table S3** Differentially expressed genes in the DM-T vs. T comparison group

Gene name	log2FC (T/DM-T)	log2FC (DM-T/T)	P value	FDR	Upregulation/downregulation (T/DM-T)
<i>KDM5D</i>	1.974727532	-1.974727532	5.00E-05	0.0265652	Upregulation
<i>DDX3Y</i>	2.190984573	-2.190984573	5.00E-05	0.0265652	Upregulation
<i>PAGE1</i>	-5.894703798	5.894703798	5.00E-05	0.0265652	Downregulation
<i>EPYC</i>	1.546131404	-1.546131404	5.00E-05	0.0265652	Upregulation
<i>MAGEB2</i>	-3.345509924	3.345509924	5.00E-05	0.0265652	Downregulation
<i>USP9Y</i>	0.573442394	-0.573442394	5.00E-05	0.0265652	Upregulation
<i>ACTL8</i>	-0.304148862	0.304148862	5.00E-05	0.0265652	Downregulation
<i>HOXC11</i>	-1.232838781	1.232838781	5.00E-05	0.0265652	Downregulation
<i>TCP11</i>	-6.87906848	6.87906848	5.00E-05	0.0265652	Downregulation
<i>MASP1</i>	5.311732661	-5.311732661	5.00E-05	0.0265652	Upregulation
<i>RPS4Y1</i>	7.097874115	-7.097874115	5.00E-05	0.0265652	Upregulation
<i>CYorf15B</i>	1.531867996	-1.531867996	5.00E-05	0.0265652	Upregulation
<i>CNTNAP4</i>	-3.079168156	3.079168156	5.00E-05	0.0265652	Downregulation
<i>TMSB4Y</i>	0.074368422	-0.074368422	5.00E-05	0.0265652	Upregulation
<i>PGLYRP4</i>	-2.246000609	2.246000609	5.00E-05	0.0265652	Downregulation
<i>DEFA5</i>	3.844265122	-3.844265122	5.00E-05	0.0265652	Upregulation
<i>NKX6-3</i>	-4.562620987	4.562620987	5.00E-05	0.0265652	Downregulation
<i>NLGN4Y</i>	2.527730961	-2.527730961	5.00E-05	0.0265652	Upregulation
<i>SOHLH1</i>	-3.615216171	3.615216171	5.00E-05	0.0265652	Downregulation
<i>PASD1</i>	-3.75581694	3.75581694	5.00E-05	0.0265652	Downregulation
<i>LCN15</i>	8.898102517	-8.898102517	5.00E-05	0.0265652	Upregulation
<i>ANKRD30B</i>	-1.347382191	1.347382191	5.00E-05	0.0265652	Downregulation
<i>MAGEA2B</i>	-4.451765	4.451765	5.00E-05	0.0265652	Downregulation
<i>PTPN0B</i>	-0.100385651	0.100385651	5.00E-05	0.0265652	Downregulation
<i>MAGEA2</i>	-3.903144347	3.903144347	5.00E-05	0.0265652	Downregulation
<i>MAGEA11</i>	-3.075833803	3.075833803	5.00E-05	0.0265652	Downregulation
<i>PLA2G2A</i>	7.387488094	-7.387488094	5.00E-05	0.0265652	Upregulation
<i>MAGEA6</i>	-5.978856866	5.978856866	5.00E-05	0.0265652	Downregulation
<i>CSAG3</i>	-4.810566494	4.810566494	5.00E-05	0.0265652	Downregulation
<i>CSAG1</i>	-5.811948767	5.811948767	5.00E-05	0.0265652	Downregulation
<i>SNORA33</i>	-5.21317617	5.21317617	5.00E-05	0.0265652	Downregulation
<i>CXorf61</i>	-3.878558603	3.878558603	5.00E-05	0.0265652	Downregulation
<i>PTPN0A</i>	-0.683624598	0.683624598	5.00E-05	0.0265652	Downregulation
<i>AC104135.3</i>	-2.321137281	2.321137281	5.00E-05	0.0265652	Downregulation
<i>SNORA72</i>	5.507864395	-5.507864395	5.00E-05	0.0265652	Upregulation
<i>IGLV4-60</i>	2.991968927	-2.991968927	5.00E-05	0.0265652	Upregulation
<i>MAGEA3</i>	-6.098613256	6.098613256	5.00E-05	0.0265652	Downregulation
<i>C7orf71</i>	-2.371759571	2.371759571	5.00E-05	0.0265652	Downregulation
<i>AP001434.2</i>	1.910467888	-1.910467888	5.00E-05	0.0265652	Upregulation
<i>RP11-543D5.1</i>	-3.593712308	3.593712308	5.00E-05	0.0265652	Downregulation
<i>RP11-798K23.4</i>	2.866615256	-2.866615256	5.00E-05	0.0265652	Upregulation
<i>AC005307.1</i>	-3.125846137	3.125846137	5.00E-05	0.0265652	Downregulation
<i>AC009133.21</i>	1.322066587	-1.322066587	5.00E-05	0.0265652	Upregulation
<i>CHRDL2</i>	6.744593403	-6.744593403	1.00E-04	0.0465128	Upregulation
<i>ZFY</i>	2.133708183	-2.133708183	1.00E-04	0.0465128	Upregulation
<i>GATA4</i>	-2.194796245	2.194796245	1.00E-04	0.0465128	Downregulation
<i>ZIC5</i>	2.806823088	-2.806823088	1.00E-04	0.0465128	Upregulation
<i>DMRTA2</i>	0.464061789	-0.464061789	1.00E-04	0.0465128	Upregulation

DM-T, diabetes mellitus-tumour; FDR, false discovery rate; T, Tumour group.

**Table S4** Differentially expressed isoforms in the DM-T vs. T comparison group

Transcript name	log2FC(T/DM-T)	log2FC (DM-T/T)	P value	FDR	Upregulation/ downregulation (T/DM-T)
CALU-001	-3.426707561	3.426707561	5.00E-05	0.0337658	Downregulation
RPS4Y1-001	7.015727254	-7.015727254	5.00E-05	0.0337658	Upregulation
CCM2-001	-3.06582216	3.06582216	5.00E-05	0.0337658	Downregulation
EPYC-001	1.546131404	-1.546131404	5.00E-05	0.0337658	Upregulation
CSDE1-003	-5.135280389	5.135280389	5.00E-05	0.0337658	Downregulation
TMSB4Y-001	0.074368422	-0.074368422	5.00E-05	0.0337658	Upregulation
FLNB-001	-2.918367151	2.918367151	5.00E-05	0.0337658	Downregulation
TNIP1-002	-3.166996566	3.166996566	5.00E-05	0.0337658	Downregulation
LCN15-002	8.845358321	-8.845358321	5.00E-05	0.0337658	Upregulation
ANKRD30B-202	-0.976018961	0.976018961	5.00E-05	0.0337658	Downregulation
MAGEA6-001	-5.873279224	5.873279224	5.00E-05	0.0337658	Downregulation
DEFA5-001	3.844265122	-3.844265122	5.00E-05	0.0337658	Upregulation
MAGEA2B-201	-2.436860093	2.436860093	5.00E-05	0.0337658	Downregulation
NAA20-001	-3.443394475	3.443394475	5.00E-05	0.0337658	Downregulation
DDX3Y-003	2.190984573	-2.190984573	5.00E-05	0.0337658	Upregulation
UNG-005	-3.442266763	3.442266763	5.00E-05	0.0337658	Downregulation
GTF3C5-005	3.795195491	-3.795195491	5.00E-05	0.0337658	Upregulation
CNN-003	-4.679373125	4.679373125	5.00E-05	0.0337658	Downregulation
HOXA9-202	4.466033216	-4.466033216	5.00E-05	0.0337658	Upregulation
MAGEA11-001	-2.884023464	2.884023464	5.00E-05	0.0337658	Downregulation
CSAG3-201	-4.191752134	4.191752134	5.00E-05	0.0337658	Downregulation
SNORA33-201	-5.21317617	5.21317617	5.00E-05	0.0337658	Downregulation
MAGEA3-001	-5.959612526	5.959612526	5.00E-05	0.0337658	Downregulation
MAGEA2-001	-3.200895075	3.200895075	5.00E-05	0.0337658	Downregulation
MAGEA2B-001	-3.56126503	3.56126503	5.00E-05	0.0337658	Downregulation
PASD1-001	-3.674912553	3.674912553	5.00E-05	0.0337658	Downregulation
CXorf61-001	-3.878558603	3.878558603	5.00E-05	0.0337658	Downregulation
FAM102A-006	-3.023599571	3.023599571	5.00E-05	0.0337658	Downregulation
ACTL8-001	-0.304148862	0.304148862	5.00E-05	0.0337658	Downregulation
PAGE1-001	-5.894703798	5.894703798	5.00E-05	0.0337658	Downregulation
HLA-A-002	7.340081528	-7.340081528	5.00E-05	0.0337658	Upregulation
AC104135.3-001	-1.823007445	1.823007445	5.00E-05	0.0337658	Downregulation
MAGEB2-001	-3.345509924	3.345509924	5.00E-05	0.0337658	Downregulation
KDM5D-002	0.619413011	-0.619413011	5.00E-05	0.0337658	Upregulation
SNORA72-201	5.507864395	-5.507864395	5.00E-05	0.0337658	Upregulation
IGLV4-60-001	2.991968927	-2.991968927	5.00E-05	0.0337658	Upregulation
ZNF295-006	1.512358379	-1.512358379	5.00E-05	0.0337658	Upregulation
KDM5C-009	-2.924704208	2.924704208	5.00E-05	0.0337658	Downregulation
CYB5R3-003	-4.524934999	4.524934999	5.00E-05	0.0337658	Downregulation
C7orf71-001	-2.371759571	2.371759571	5.00E-05	0.0337658	Downregulation
SH3BGR-010	-1.962267675	1.962267675	5.00E-05	0.0337658	Downregulation
SOHLH1-201	-3.313253109	3.313253109	5.00E-05	0.0337658	Downregulation
SUMF2-001	-4.37631817	4.37631817	5.00E-05	0.0337658	Downregulation
AP001434.2-001	1.910467888	-1.910467888	5.00E-05	0.0337658	Upregulation
RP11-543D5.1-001	-3.593712308	3.593712308	5.00E-05	0.0337658	Downregulation
KDM5D-006	0.991709583	-0.991709583	5.00E-05	0.0337658	Upregulation
USP9Y-003	0.44244991	-0.44244991	5.00E-05	0.0337658	Upregulation
BGN-004	5.620137698	-5.620137698	5.00E-05	0.0337658	Upregulation
TPT1-AS1-016	-1.337208701	1.337208701	5.00E-05	0.0337658	Downregulation
RP11-798K23.4-001	2.866615256	-2.866615256	5.00E-05	0.0337658	Upregulation
NKX6-3-002	-3.645690132	3.645690132	5.00E-05	0.0337658	Downregulation
PGRMC1-201	5.765683251	-5.765683251	5.00E-05	0.0337658	Upregulation
ANKRD17-012	-1.861272552	1.861272552	5.00E-05	0.0337658	Downregulation
AC005307.1-001	-3.125846137	3.125846137	5.00E-05	0.0337658	Downregulation
GPR56-004	-4.884680944	4.884680944	5.00E-05	0.0337658	Downregulation
AC009133.21-001	1.322066587	-1.322066587	5.00E-05	0.0337658	Upregulation

DM-T, diabetes mellitus-tumour; FDR, false discovery rate; T, Tumour group.