

## SUPPLEMENTARY TABLES

**Supplementary Table 1. List of cancer types included in this study.**

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| ACC  | Adrenocortical carcinoma;                        |
| BLCA | Bladder urothelial carcinoma;                    |
| BRCA | Breast invasive carcinoma;                       |
| CESC | Cervical squamous cell carcinoma;                |
| CHOL | Cholangiocarcinoma;                              |
| COAD | Colon adenocarcinoma;                            |
| DLBC | Lymphoid Neoplasm Diffuse Large B-cell Lymphoma; |
| ESCA | Esophageal carcinoma;                            |
| GBM  | Glioblastoma multiforme;                         |
| HNSC | Head and Neck squamous cell carcinoma;           |
| KICH | Kidney Chromophobe;                              |
| KIRC | Kidney renal clear cell carcinoma;               |
| KIRP | Kidney renal papillary cell carcinoma;           |
| LGG  | Brain lower grade glioma;                        |
| OV   | Ovarian serous cystadenocarcinoma;               |
| MESO | Mesothelioma;                                    |
| LIHC | Liver hepatocellular carcinoma;                  |
| LUAD | Lung adenocarcinoma;                             |
| LUSC | Lung squamous cell carcinoma;                    |
| PAAD | Pancreatic adenocarcinoma;                       |
| PRAD | Prostate adenocarcinoma;                         |
| PCPG | Pheochromocytoma and Paraganglioma;              |
| READ | Rectum adenocarcinoma;                           |
| SARC | Sarcoma;   |
| SKCM | Skin Cutaneous Melanoma;                         |
| LAML | Acute myeloid leukemia;                          |
| TGCT | Testicular Germ Cell Tumors;                     |
| THCA | Thyroid carcinoma;                               |
| THYM | Thymoma;   |
| STAD | Stomach adenocarcinoma;                          |
| UCEC | Uterine Corpus Endometrial Carcinoma;            |
| UCS  | Uterine Carcinosarcoma;                          |
| UVM  | Uveal Melanoma.                                  |

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**Supplementary Table 2. Clinical information of the 9 glioma patients.**

| <b>Gender</b> | <b>Age</b> | <b>Tumor site</b>  | <b>pathologic diagnosis</b>           |
|---------------|------------|--------------------|---------------------------------------|
| Female        | 37         | right insular lobe | Low grade glioma(WHO grade II)        |
| Man           | 64         | left temporal lobe | Diffuse glial tumor(WHO grade III-IV) |
| Female        | 57         | left parietal lobe | Glioblastoma(WHO grade IV)            |
| Man           | 66         | left parietal lobe | High grade glioma(WHO grade IV)       |
| Man           | 48         | left parietal lobe | Glioblastoma(WHO grade IV)            |
| Man           | 58         | left frontal lobe  | WHO grade III-IV                      |
| Man           | 55         | left frontal lobe  | WHO grade III-IV                      |
| Man           | 52         | left frontal lobe  | Glioblastoma(WHO grade IV)            |
| Man           | 63         | left frontal lobe  | Diffuse glial tumor (WHO grade III)   |

**Supplementary Table 3. The top100 NID1-related genes in gliomas.**

| <b>Gene Symbol</b> | <b>Gene ID</b>      | <b>PCC</b> |
|--------------------|---------------------|------------|
| FMO1               | ENSG00000010932.15  | 0.84       |
| ABCA9              | ENSG000000154258.16 | 0.81       |
| EDARADD            | ENSG000000186197.12 | 0.81       |
| ENO1P1             | ENSG000000244457.2  | 0.81       |
| AC026904.1         | ENSG000000233858.4  | 0.81       |
| SCARA5             | ENSG000000168079.16 | 0.80       |
| C1QTNF9            | ENSG000000240654.6  | 0.80       |
| CILP               | ENSG000000138615.5  | 0.80       |
| KERA               | ENSG000000139330.5  | 0.80       |
| ADH1C              | ENSG000000248144.5  | 0.80       |
| SULT1E1            | ENSG000000109193.10 | 0.80       |
| RP11-567J20.1      | ENSG000000253702.1  | 0.80       |
| TNNT3              | ENSG000000130595.16 | 0.79       |
| CYGB               | ENSG000000161544.9  | 0.79       |
| FZD1               | ENSG000000157240.3  | 0.79       |
| FABP4              | ENSG000000170323.8  | 0.79       |
| RP11-199H2.2       | ENSG000000282265.1  | 0.79       |
| CAPN6              | ENSG000000077274.8  | 0.79       |
| DPPA3P3            | ENSG000000270415.1  | 0.79       |
| CYP1B1-AS1         | ENSG000000232973.11 | 0.79       |
| RP11-1K3.1         | ENSG000000257281.1  | 0.79       |
| PRG4               | ENSG000000116690.11 | 0.79       |
| CDC42EP5           | ENSG000000167617.2  | 0.79       |
| AP004372.1         | ENSG000000238117.1  | 0.79       |
| RP11-1260E13.1     | ENSG000000262920.5  | 0.79       |
| RN7SKP282          | ENSG000000252633.1  | 0.79       |
| UGT2B24P           | ENSG000000249956.4  | 0.79       |
| RP11-351A20.1      | ENSG000000261818.1  | 0.79       |
| AADACL2-AS1        | ENSG000000242908.6  | 0.79       |
| SNORA40            | ENSG000000212579.1  | 0.79       |
| RNU6-748P          | ENSG000000207378.1  | 0.79       |
| RP11-117D22.1      | ENSG000000226938.1  | 0.79       |
| P2RY10P2           | ENSG000000232168.2  | 0.79       |
| RNA5SP307          | ENSG000000199733.1  | 0.79       |
| RP11-204N11.2      | ENSG000000258379.1  | 0.79       |
| RP11-336A10.7      | ENSG000000228685.1  | 0.79       |
| SRP68P1            | ENSG000000266129.1  | 0.79       |
| AC011523.2         | ENSG000000267968.1  | 0.79       |
| RP11-146N18.1      | ENSG000000267134.1  | 0.79       |
| ZNF736P11Y         | ENSG000000215537.3  | 0.79       |
| RP11-259O2.2       | ENSG000000248597.1  | 0.79       |
| ZBTB8OSP1          | ENSG000000183432.6  | 0.79       |
| AC011193.1         | ENSG000000225582.1  | 0.79       |
| CTLA4              | ENSG000000163599.14 | 0.79       |
| CERS3              | ENSG000000154227.13 | 0.78       |
| RP11-401O9.4       | ENSG000000273388.1  | 0.78       |
| PRAC1              | ENSG000000159182.4  | 0.78       |
| RP11-359G22.2      | ENSG000000230400.1  | 0.78       |

|               |                   |      |
|---------------|-------------------|------|
| DCSTAMP       | ENSG00000164935.6 | 0.78 |
| AC093627.11   | ENSG00000239715.1 | 0.78 |
| AC064834.1    | ENSG00000224099.1 | 0.78 |
| RP11-392O17.1 | ENSG00000228536.1 | 0.78 |
| RP11-89H19.1  | ENSG00000205537.2 | 0.78 |
| AP000998.2    | ENSG00000227330.1 | 0.77 |
| RP11-401O9.3  | ENSG00000264067.1 | 0.77 |
| RP11-863P13.3 | ENSG00000261327.4 | 0.77 |
| PA2G4P1       | ENSG00000237828.1 | 0.77 |

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