**Table S1 A comparison between the previous studies and our study in immune-related genes in glioma**

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| --- | --- | --- | --- | --- | --- |
| Author | Objects | Data Type | Factors | Databases | Genes |
| Xu[22] | LGG | Bulk RNASeq | 1p/19q | CGGA/TCGA | S100A3,FAM19A3,ADM2,CLCF1,TNFRSF11B,GLP1R,TRDC,F2RL1,VAV3,BMP8B,NTS,AR,PRLHR |
| Cheng[23] | GBM | Bulk RNASeq |  | CGGA/TCGA | FOXO3,IL6,IL10,ZBTB16,CCL18,AIMP1,FCGR2B,MMP9 |
| Yin[15] | LGG | Bulk RNASeq | Tumor mutation burden | CGGA/TCGA | BIRC5,CRLF1,GDF15,LTF,PRLHR,TNFRSF11B |
| Qin[16] | GBM | Bulk RNASeq | TP53 | CGGA/TCGA | S100A8,CXCL1,IGLL5 |
| Yang[24] | GBM | Bulk RNASeq |  | CGGA/TCGA/Rembrandt | TREM1,GBP2,IFITM2,CITA,TYROBP |
| Zhang[17] | LGG | Bulk RNASeq |  | CGGA/TCGA/GTEx | CANX,HSPA1B,KLRC2,PSMC6,RFXAP,TAP1 |
| Ni[18] | LGG | Bulk RNASeq |  | TCGA | HRH3,APLNR.FCER1G,SYK,GNG12,GNG13,GNG5,PTPN6,GPR183,CXCL11,CXCL9,HLA-B,VAMP8,SSTR1,CCR5,PTAFR,C3,TAS1R1,ANXA1,OPRK1,ITGB2,CCL5,CXCR3,CXCR4,GNGT2 |
| Zhao[25] | GBM | Bulk RNASeq |  | CGGA/TCGA | CD1D,PTX3,RAC2,ESM1,MDK,TNFSF14,IL2RB,OSMR |
| Our Study | LGGGBMTAMs | Bulk RNASeq/scRNASeq |  | CGGA/TCGA/GEO | CD163,FPR3,LPAR5,P2RY12,PLAUR,SIGLEC1 |