

Figure S1. Correlation between CC chemokines family and the immune score raised by Aysers et al. Notes: \* = P < 0.05.



Figure S2. Correlation between CC chemokines family and markers of IFN-  $\alpha$  /  $\beta$  signaling. Notes: A: Correlation between chemokines family and IFNA13, IFNA14, IFNA16, IFNA17, IFNA2, IFNA21, IFNA4, IFNA5, IFNA6, IFNA7, IFNA8, IFNAR1, IFNAR2, IFNB1, IP8K2, IRF1, IRF2, IRF3, IRF4, IRF5, IRF6, IRF7, IRF8, IRF9, \* = P < 0.05; B: Correlation between chemokines family and ISG15, ISG20, JAK1, KPNA1, KPNB1, MX1, MX2, OAS1, OAS2, OAS3, OASL, PSMB8, PTPN1, PTPN11, PTPN6, RNASEL, RSAD2, SAMHD1, RSAD2, SAMHD1, SOCS1, SOCS3, STAT1, STAT2, TYK2, USP18, XAF1, \* = P < 0.05; C: Correlation between chemokines family and ABCE1, ADAR, BST2, EGR1, GBP2, HLA-A, HLA-B, HLA-C, HLA-E, HLA-F, HLA-G, HLA-H, IFI27, IFI35, IFI6, IFIT1, IFIT2, IFIT3, IFIT5, IFITM1, IFITM2, IFITM3, IFNA1, IFNA10, \* = P < 0.05.



Figure S3. Correlation between CC chemokines family and markers of STING signaling. Notes: \* = P < 0.05.



Figure S4. Correlation between CC chemokines family and markers of innate immunity. Notes: A: A: Correlation between chemokines family and KLRC3, KLRC4, KLRC4-KLRK1, KLRD1, KLRK1, LILRA2, LYN, MAP3K7, MATR3, MAVS, MBL2, MNDA, NLRC4, NONO, PAK1, PAK2, PAK3, PLCG2, PQBP1, PRKDC, PSPC1, \* = P < 0.05; B: Correlation between chemokines family and PYCARD, PYHIN1, RBM14, SFPQ, SIN3A, SRC, STING1, SYK, TBK1, TLR4. TLR9, TOMM70, TRAF6, TRIM5, TYROBP, XRCC5, XRCC6, ZBP1, ZCCHC3, ZNFX1, \* = P < 0.05; C: Correlation between chemokines family and AIM2, CASP6, CGAS, CLEC6A, CLEC7QA, COLEC10, COLEC11, CREBBP, EP300, FCN1, FCN2, FCN3, FFAR2, FYN, HCK, HEXIM1, HMGB1, HSP90AA1, IFI16, IKBKB, KLRC2, \* = P < 0.05.



Figure S5. The level of CC chemokines family in KRAS-mutant or -wild type LUAD patients. Notes: - = P > 0.05, \* = P < 0.05, \*\* = P < 0.01, \*\*\* = P < 0.001, \*\*\*\* = P < 0.001.



Figure S6. The expression level of HIF- $\alpha$  in cells of different group. Notes: \*\*\* = P < 0.001.



Figure S7. Cloning and sequencing identification of CCL28 promoter fragment and its mutants. Notes: A-B: The sequencing of CCL28 promoter fragment, the red part was the mutant sites.