**Supplementary Table S1.** Prediction of potential proteins interacting with GRM4

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| #BioGRID Interaction ID | Entrez Gene Interactor A | Entrez Gene Interactor B | Official Symbol Interactor A | Official Symbol Interactor B | Experimental System | Experimental System Type | Pubmed ID |
| 607569 | 24417 | 56469 | Grm4 | PIAS1 | Reconstituted Complex | physical | 21288202 |
| 607573 | 24417 | 10401 | Grm4 | PIAS3 | Reconstituted Complex | physical | 21288202 |
| 607578 | 24417 | 8535 | Grm4 | CBX4 | Reconstituted Complex | physical | 21288202 |
| 607582 | 24417 | 7329 | Grm4 | UBE2I | Reconstituted Complex | physical | 21288202 |
| 860700 | 25400 | 24417 | CAMK2A | Grm4 | Affinity Capture-Western | physical | 15494036 |

**Supplementary Figures**



**Figure S1.** Overexpression of GRM4-GFP fusion protein in U2OS cells. (**A**) After 48 h of transfection of pCMV-GRM4-GFP or control vectors into U2OS cells, the relative content of GRM4 mRNA was detected by quantitative PCR. GAPDH served as an internal control. Each bar indicates the mean ± SD of n = 3 experiments. \* indicates *P* < 0.05, \*\* indicates *P* < 0.01. (**B**) GRM4-GFP fusion protein overexpression in U2OS cells was detected by fluorescence microscopy (**C**) Western Blot analysis was used to detect the relative expression of GRM4-GFP fusion protein by anti-GRM4 or anti-GFP separately. β-actin served as an internal control.



**Figure S2.** Prediction of GTP-interacting residues of CBX4 by GTPbinder (http://crdd.osdd.net/raghava/gtpbinder/)



**Figure S3.** Relative expression of GRM4 and CBX4 across TCGA cancers (with tumor and normal samples)