**Supplementary Information (SI)**

# Hypermethylated gene ANKDD1A is a candidate tumor suppressor that interacts with FIH1 and decreases HIF1α stability to inhibit cell autophagy in the glioblastoma multiforme hypoxia microenvironment

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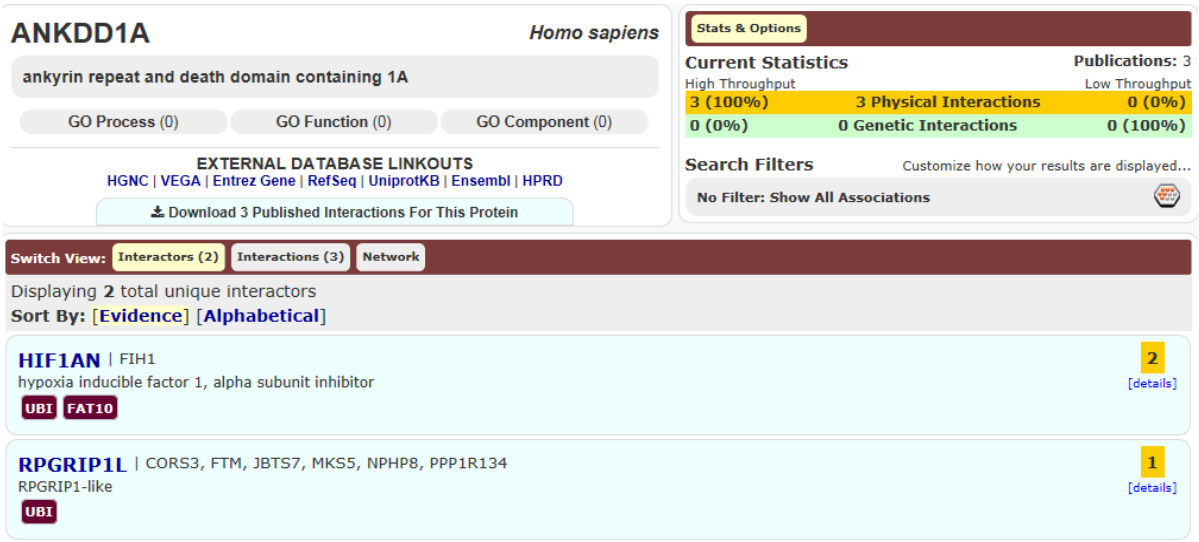
## Supplementary Data

**Table S1**. Tumor type, grade, genetic and mutational profile of patient derived cells that use in this article.

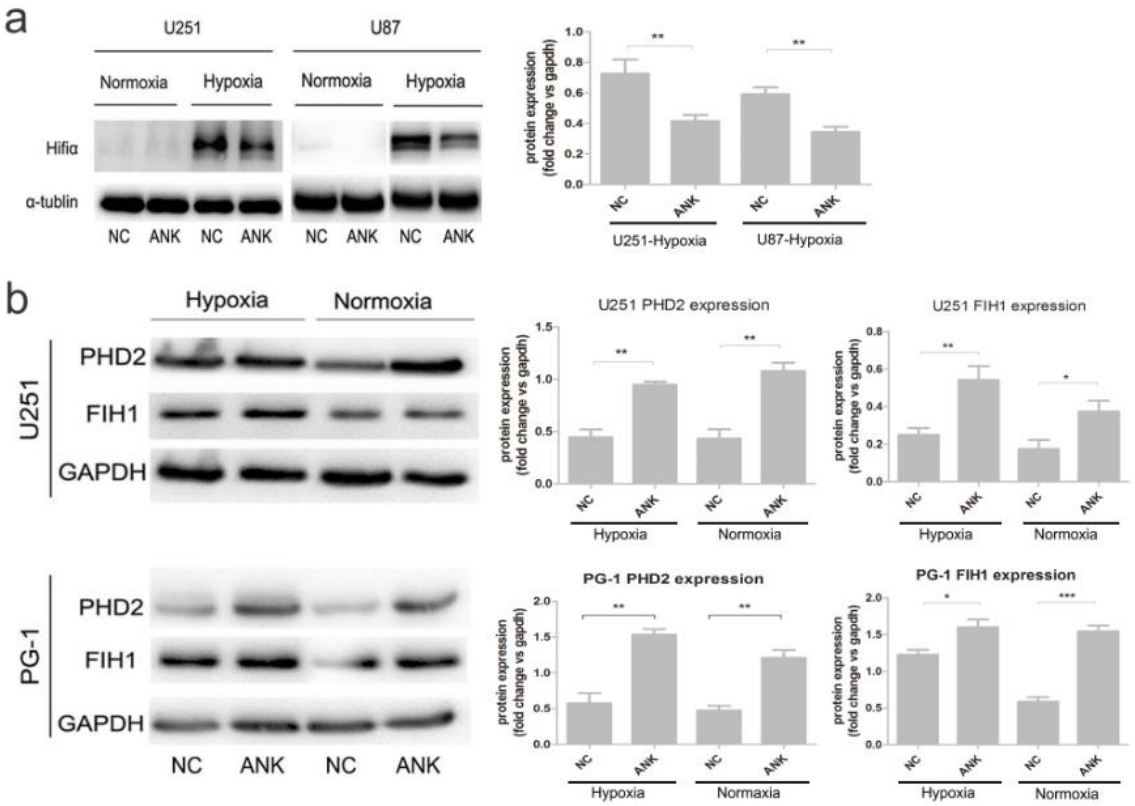
| Abbreviation in manuscript | Name | Tumor Grade | Tumor Type | Olig2 | GFAP | Ki67 | p53 | MGMT methylation | IDH1 | 1p/19q deleted |
|---|---|---|---|---|---|---|---|---|---|---|
| PG-1 | G20151216 | grade IV | Glioblastoma | + + | + | 30% + | Mutation | Methylated | Wild | 1p36 |
| PG-2 | G20151104 | grade IV | Glioblastoma | + | + | 40% + | Wild | Methylated | Wild | 1p36&19q13 |
| PG-3 | G20151124B | GBM | Glioblastoma multiforme | + | + | 30% + | Mutation | Methylated | Wild | 1p36 |
| PG-4 | G20151124C | grade II | Diffuse astrocytic glioma | + | + | 2% + | Mutation | Methylated | Wild | 1p36 |
| PG-5 | G20151125 | GBM | Glioblastoma multiforme | + | + | 10% + | Mutation | Methylated | Wild | 19q13 |
| PG-6 | G20151105 | grade II-III | Astrocytoma | + | + | 10% + | Mutation | Methylated | Wild | 1p/19q intact |

**Figure S1, related to Result 3**



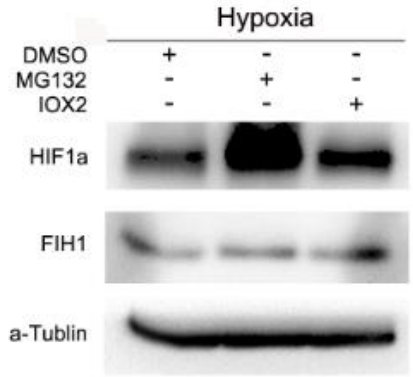

FIH1 and RPGRIP1L were predicted to interact with ANKDD1A by BioGRID screen.

**Figure S2, related to Result 5**




Quantification assay of western blotting of Figure 5a (**a**) and Figure 5e (**b**).

**Figure S3, related to Result 5**




MG132 (proteasome inhibitor) or IOX2 (PHD2-specific inhibitor) increased the HIF1α protein level but had no noticeable effect on FIH1 in GBM cells under hypoxia.