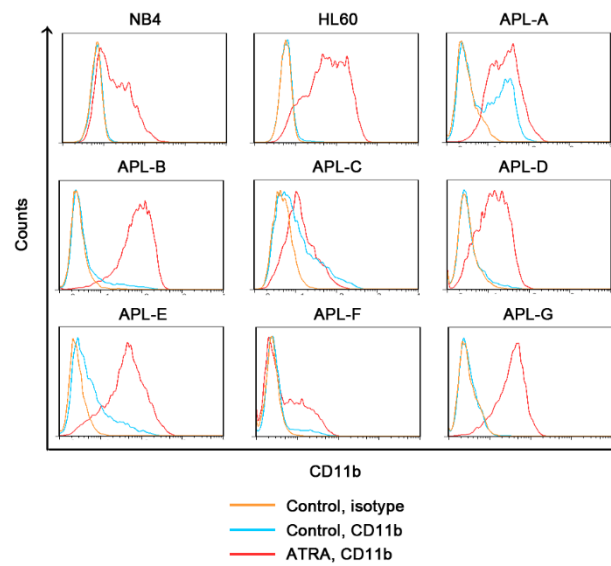
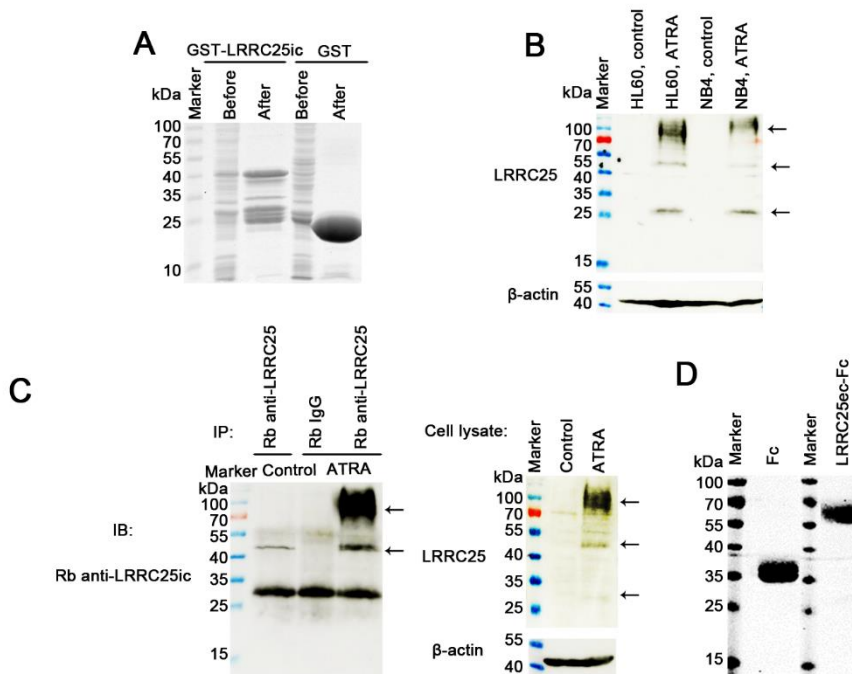




1

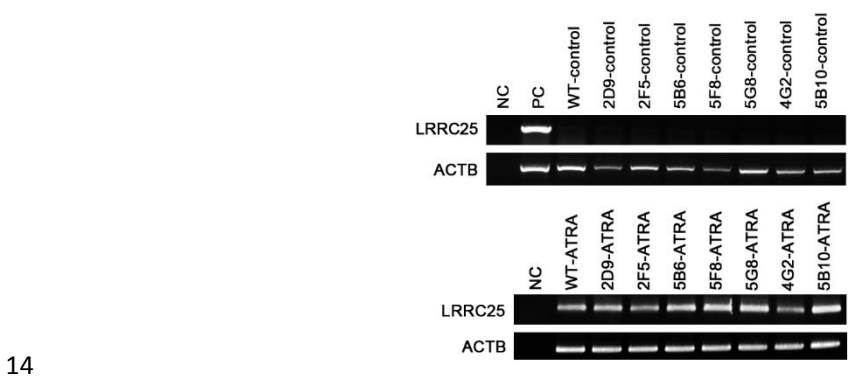
2 **Figure S1:** CD11b expression by flow cytometry was shown to indicate
 3 differentiation of AML cell lines and bone marrow cells of APL patients before and
 4 after ATRA-treatment.



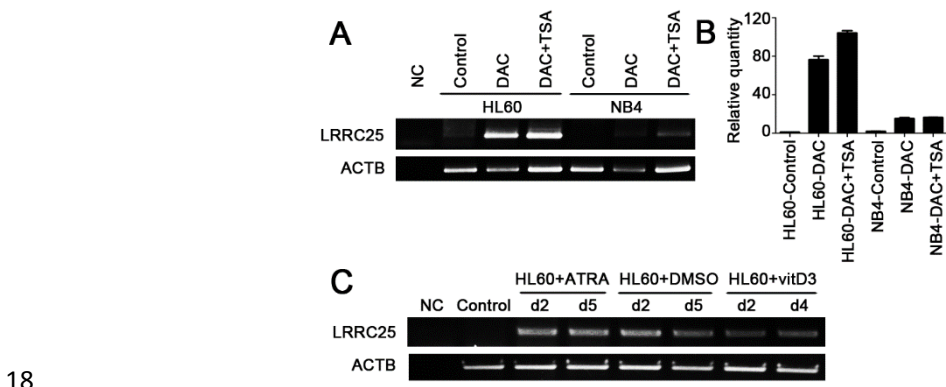
5

6 **Figure S2:** Preparation of prokaryotic and eukaryotic proteins and identification of
 7 rabbit anti-LRRC25ic polyclonal antibody. A, Identification of GST-LRRC25ic and

8 GST protein before and after purification. B, Western blot shows the rabbit
9 anti-human LRRC25ic polyclonal antibody recognized three specific bands as
10 indicated by arrows. C, Rabbit anti-LRRC25ic polyclonal antibody could be used for
11 immunoprecipitation of intrinsic LRRC25 in ATRA-treated NB4 cells (left panel),
12 right panel shows 10% of input. D. Identification of purified Fc and LRRC25ec-Fc
13 recombinant proteins.



14
15 **Figure S3:** Semi-quantitative PCR shows all CRISPR-Cas9 targeted clones responded
16 to ATRA with LRRC25 mRNA expression (with or without mutation). 4G2 and 5B10
17 were used as two randomly selected WT control clones.



18
19 **Figure S4:** LRRC25 could be regulated by epigenetic drugs and up-regulated by other
20 inducing reagents. A and B, Semi-quantitative and real-time PCR show LRRC25 was

21 up-regulated in AML cells when treated with 5-aza-2'-deoxycytidine (DAC) or
22 combination of DAC and trichostatin A (TSA), which are demethylation drug and
23 histone deacetylase inhibitor, respectively. HL60 was treated with 500nM DAC for 3
24 days or with 200nM TSA for the last 1 day. Data in triplicates were shown in mean $\pm$
25 SD in S4B. C, Semi-quantitative PCR shows LRRC25 could be up-regulated with
26 ATRA (1 μ M), DMSO (1.25%) and vitD3 (100 nM) in HL60 cells.