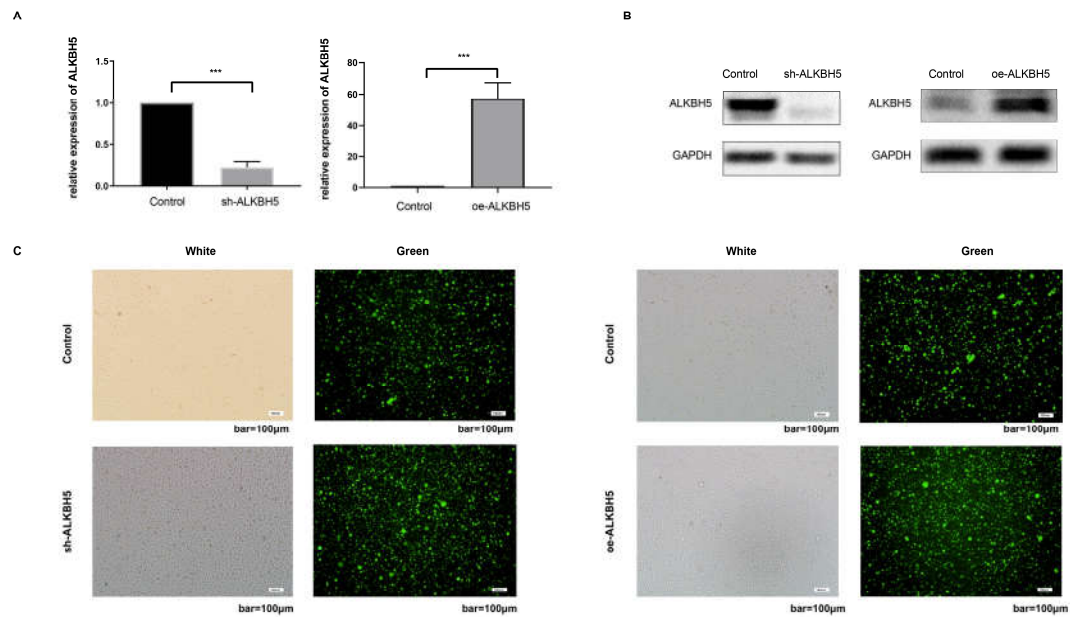
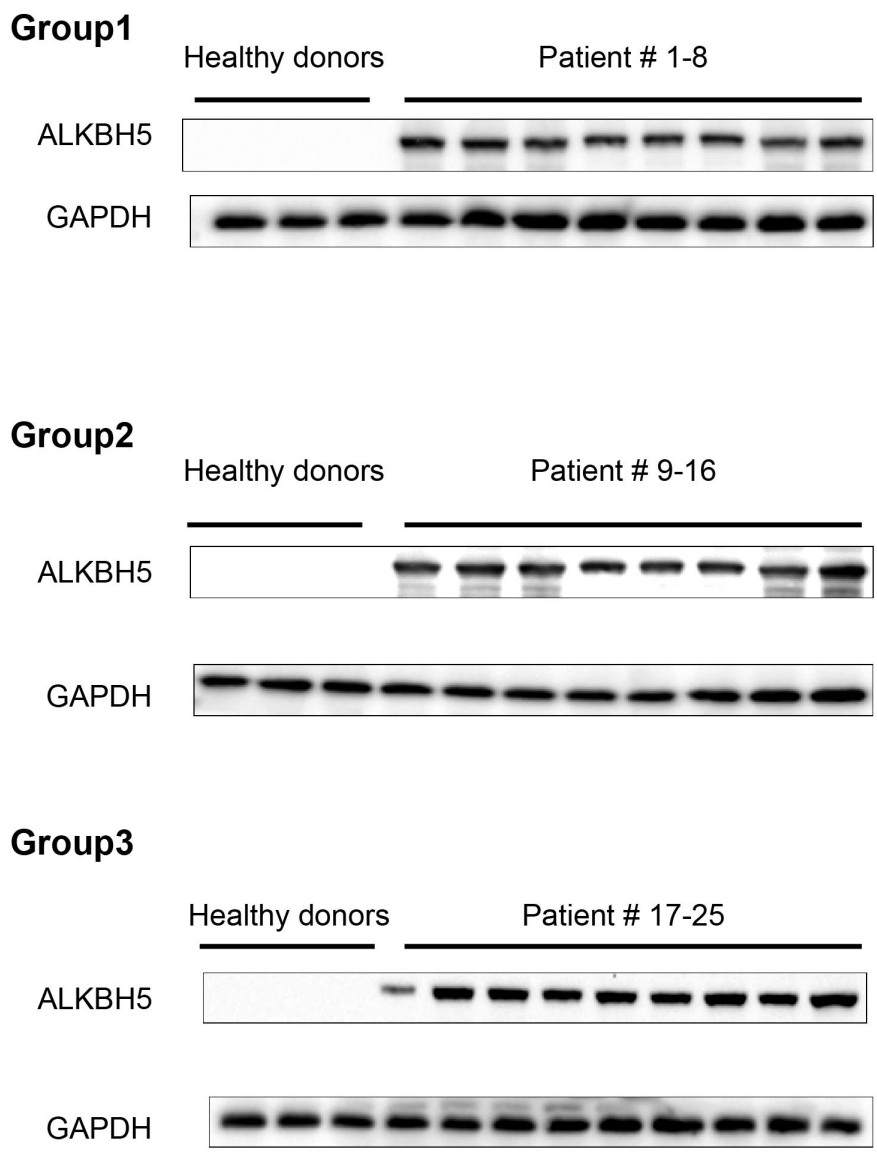


## Supplemental files



**Figure S1. The transfection efficiency of lentivirus in RPMI8226 cells**

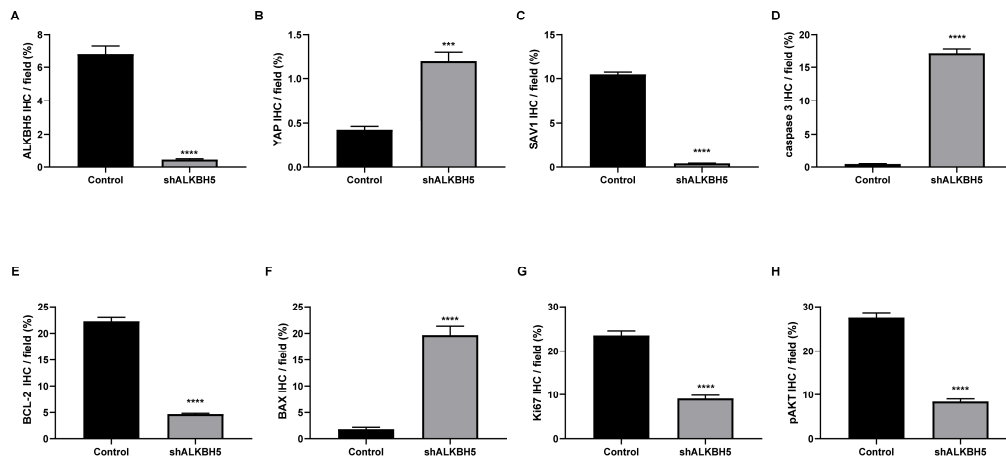
(A) The ALKBH5 mRNA level in oe-ALKBH5 and sh-ALKBH5 RPMI8226 cells. (B) The expression levels of ALKBH5 in oe-ALKBH5 and sh-ALKBH5 myeloma cells. (C) Representative images of transfected RPMI8226 cells under fluorescence microscopy. White: general microscopy field, Green: fluorescence microscopy field, bar=100µm\*\*\*P<0.001.



**Figure S2. The expression of ALKBH5 from individual patient examined by western blot**

Patient	Gender	Age (year)	MM stage (ISS)	LDH (U/L)	$\beta$ 2-MG (mg/L)	Serum Albumin (g/L)	MM-FISH
1	female	50	II	75	4.7	23.3	t(4;14)(p16;q32)
2	male	68	III	90	7.5	24.5	
3	female	71	I	139	1.9	39.6	
4	male	65	I	187	1.4	38.5	
5	female	69	I	89	3.2	36	t(4;14)(p16;q32)
6	female	57	III	305	17.1	38.6	t(4;14)(p16;q32)
7	male	57	I	149	1.2	43	
8	female	74	II	300	3.9	19	
9	female	73	III	325	13.1	27.7	t(4;14)(p16;q32)
10	female	63	III	225	59.3	21.4	
11	female	57	II	320	4.3	20	
12	female	71	I	197	2.2	36.7	
13	female	69	III	288	3.6	30.9	
14	female	69	I	99	3.1	37.8	
15	female	56	II	165	5.1	35	
16	male	59	III	340	7.5	18.6	
17	female	59	I	125	1.6	32.7	
18	female	71	I	150	2.5	41.2	
19	female	74	II	136	4.7	32.5	
20	male	81	III	129	8.5	35.1	
21	female	68	I	205	1.8	36.1	
22	female	69	III	166	7.6	32	t(11;14)(q13;q32)
23	female	64	I	254	2.8	39.5	
24	male	65	III	183	13	28.8	
25	male	66	III	220	5.6	17.9	

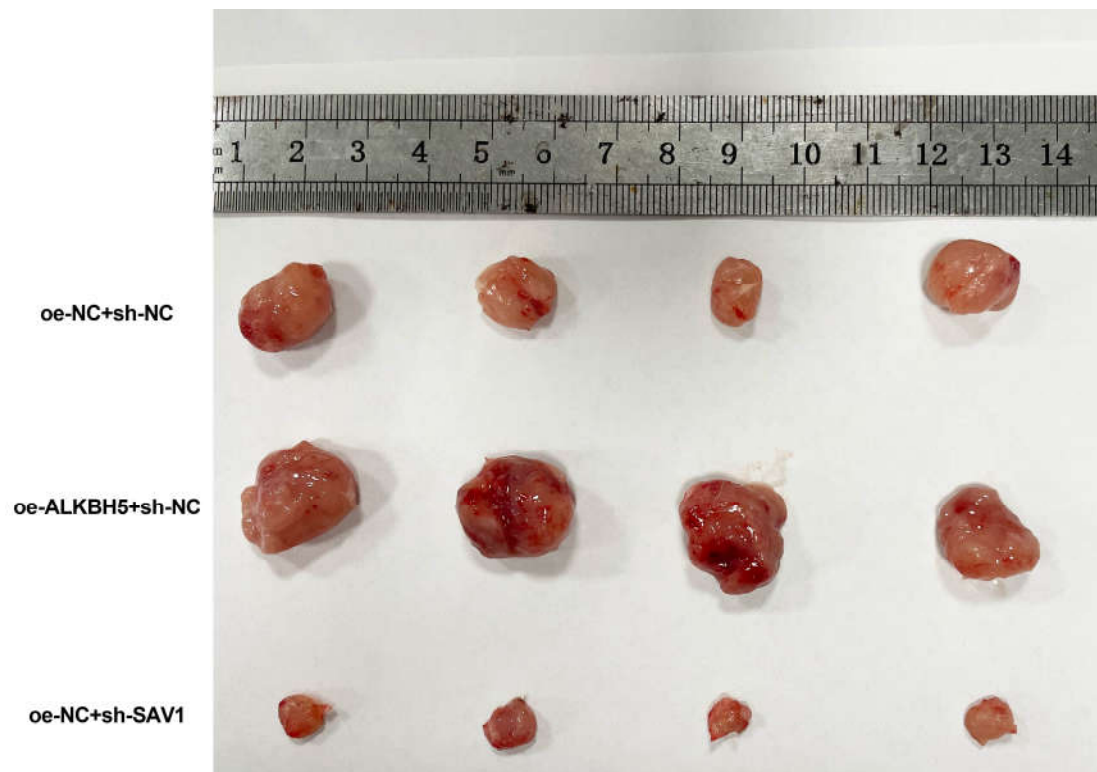
**Table S1. The patients' information**



**Figure S3. Stastical diaram of the IHC result of figure 3C**

(A)-(F) Qualification of ALKBH5, YAP, SAV1, caspase 3, BCL-2, BAX, Ki67 and pAKT IHC result

in the ALKBH5<sup>-</sup> and control cell populations. \*\*\*P<0.001, \*\*\*\*P<0.0001.



**Figure S4. The in vivo cell derived xenograft models showed that tumors from oe-ALKBH5+sh-NC group had an increase in tumor volume and significantly delayed in ALKBH5-overexpression and SAV1-silencing group.**