

Supplementary Figure 1

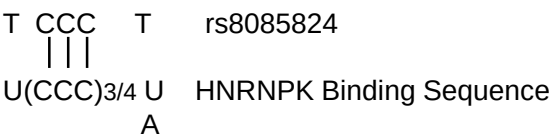


Figure 1. HNRNPK binding sequence comparison with rs8085824.

Supplementary Figure 2

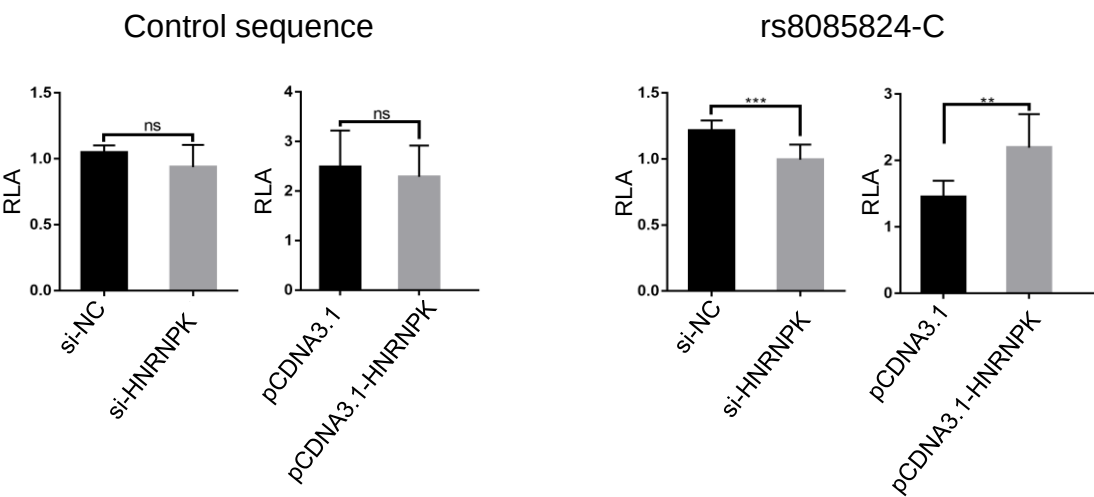


Figure 2. The luciferase reporter gene demonstrated that HNRNPK could regulate luciferase activity through rs8085824-C, through knockdown or overexpression of HNRNPK in DLD1 cells(n>3). RLA relative luciferase activity, *P* value was calculated using Student's *t* test with two tails. Error bars, SD. * *P* < 0.05, ** *P* < 0.01, *** *P* < 0.001, **** *P* < 0.0001.

Supplementary Table

Supplementary Table 1. sequences of sgRNA primers

sgRNA name	sequence (5'-3')	
sgRNA-1	rs8085824T-sgrna-85-1	CACCGCCCCTTCTCCCCTTCTCTGC
	rs8085824T-sgrna-85-2	AAACGCAGAGAAGGGGAGAAAGGGGC
sgRNA-2	rs8085824C-sgrna-85-1	CACCGCCCCTTCTCCCCTTCCCTGC
	rs8085824C-sgrna-85-2	AAACGCAGGGAAGGGGAGAAAGGGGC
sgRNA-3	rs8085824-sgrna-101-1	CACCGCTGCCGGCACCCCCATCCCC
	rs8085824-sgrna-101-2	AAACGGGGATGGGGGTGCCGGCAGC

Supplementary Table 2. sequences of qPCR primers

qPCR primer	(5'-3')
SMAD7-Q-F	GCTCCCATCCTGTGTGTTAA
SMAD7-Q-R	TAGGTGTCAGCCTAGGATGGT
HNRNPK-Q-F	GGCAGTGATTGGAAAAGGAG
HNRNPK-Q-R	CACTGCTGTCTGGGACTGAA
GAPDH-Q-F	TGCACCACCAACTGCTTAGC
GAPDH-Q-R	GGCATGGACTGTGGTCATGAG
DDX21-Q-F	TCATCAAGGACGCACTATCATCT
DDX21-Q-R	CCTTTCAGGGTGATTTCCCTTT
THOC6-Q-F	TCTGGGTCAGACAGAGGTGT
THOC6-Q-R	TCCTGTATGGAGGCTGACGA
PTBP1-Q-F	ATTCTTTTCGGCGTCTACGGT
PTBP1-Q-R	TATTGAACAGGATCTTCACGCG
H1.3-Q-F	CCAAGAGTGCGAAAAAGGTGA
H1.3-Q-R	GCTTCCCCGACTTAGGCTT

Supplementary Table 3. Antibody list for Western-Blot

Antibody	corporation	Cat No
Anti-SMAD7 Antibody	Signalway Antibody	37036
Anti-H1.3 Antibody	Abcam	Ab183736
Anti-GAPDH Antibody	Proteintech	6004-1-Ig
Anti-HNRNPK Antibody	Proteintech	67708-1-Ig
Anti-PARP1 Antibody	Proteintech	66520-1-Ig
Anti-THOC6 Antibody	Proteintech	15316-1-AP
Anti-DDX21 Antibody	Proteintech	66925-1-Ig

Supplementary Table 4. sequences of siRNA primers

siRNA sequence	sense (5'-3')	Antisense (5'-3')
hHNRNPK-389	UGCCAGUGUUUCAGUCCCAGATT	UCUGGGACUGAAACACUGGCATT
hHNRNPK-1546	CAGAUGUUGAAGGAUUCUAAUTT	AUUAGAAUCCUUCAACAUCUGTT
hDDX21-1566	CCUGAGGUUGAUUUGGUUAUATT	UAUAACCAAAUCAACCUCAGGTT
hDDX21-967	GCAUGAGGAAUGGGAUUGAUATT	UAUCAAUCCCAUUCCUCAUGCTT
hTHOC6-355	GCGGCUCCAUAUGACCAUCUUTT	AAGAUGGUCAUAUGGAGCCGCTT
hTHOC6-730	AGACUGUCAGUUGCACACUAUTT	AUAGUGUGCAACUGACAGUCUTT
hH1-3-324	GCAAAGGUACUCUGGUGCAGATT	UCUGCACCAGAGUACCUUUGCTT
hH1-3-562	GAAAGUGGCCAAGAGUGCGAATT	UUCGCACUCUUGGCCACUUUCTT