

SUPPLEMENTARY TABLES

Supplementary Table 1. Details of the study subjects.

	Age	Gender	Segment	Diagnosis	Type	Cell culture	Total RNA extraction
OPLL-1	60	Female	C5-7	OPLL	Localized	√	
OPLL-2	52	Male	C4-6	OPLL	Localized	√	
OPLL-3	59	Male	C4-6	OPLL	Localized		√
OPLL-4	37	Male	C5-7	OPLL	Localized		√
OPLL-5	41	Female	C4-6	OPLL	Mixed		√
OPLL-6	54	Female	C5-7	OPLL	Segmental		√
OPLL-7	60	Male	C4-6	OPLL	Mixed	√	
OPLL-8	43	Female	C4-6	OPLL	Segmental		√
OPLL-9	54	Male	C4-6	OPLL	Localized	√	
OPLL-10	53	Female	C5-7	OPLL	Localized		√
OPLL-11	74	Female	C5-7	OPLL	Mixed		√
OPLL-12	65	Male	C5-7	OPLL	Continuous	√	
OPLL-13	61	Female	C5-7	OPLL	Localized		√
OPLL-14	46	Female	C4-6	OPLL	Localized		√
OPLL-15	48	Male	C4-6	OPLL	Mixed	√	
OPLL-16	31	Male	C4-6	OPLL	Localized	√	
OPLL-17	56	Female	C4-6	OPLL	Segmental		√
OPLL-18	57	Female	C5-7	OPLL	Segmental	√	
non-OPLL-1	47	Female	C4-6	CDH		√	
non-OPLL-2	50	Female	C4-6	CDH		√	
non-OPLL-3	55	Male	C5-7	CDH			√
non-OPLL-4	45	Female	C5-7	CDH			√
non-OPLL-5	50	Female	C5-7	CDH			√
non-OPLL-6	65	Male	C3-5	CDH		√	
non-OPLL-7	64	Female	C5-7	CDH			√
non-OPLL-8	68	Female	C5-7	CDH		√	
non-OPLL-9	60	Male	C4-6	CDH		√	
non-OPLL-10	54	Male	C5-7	CDH		√	
non-OPLL-11	50	Male	C3-5	CDH		√	
non-OPLL-12	53	Male	C4-6	CDH			√
non-OPLL-13	50	Female	C5-7	CDH			√
non-OPLL-14	40	Male	C3-5	CDH			√
non-OPLL-15	51	Female	C4-6	CDH			√
non-OPLL-16	56	Female	C4-6	CDH			√
non-OPLL-17	45	Male	C3-5	CDH			√
non-OPLL-18	62	Female	C5-7	CDH		√	

Annotation

OPLL, ossification of posterior longitudinal ligament; CDH, cervical disc herniation OPLL-10, OPLL-11, OPLL-14, non-OPLL-7, non-OPLL-15, and non-OPLL-16 were selected to perform the Microarray analysis.

Supplementary Table 2. RNA quality of the 6 tissue samples for microarray.

Sample	OD260/280	OD260/230	Concentration (ng/ul)	Volume (ul)	Quantity (ng)	QC Purity Pass or Fail
OPLL-10	1.86	2.00	130.88	30	3926.40	Pass
OPLL-11	1.89	2.06	172.90	30	5187.00	Pass
OPLL-14	2.08	1.98	997.35	20	19947.00	Pass
non-OPLL-7	1.85	2.08	176.00	30	5280.00	Pass
non-OPLL-15	1.82	1.84	101.64	30	3049.20	Pass
non-OPLL-16	2.02	1.92	338.51	15	5077.65	Pass

Supplementary Table 3. Primers used in this study.

hsa_circ_0001588	F	TGGTCTCATCTACGAGGAGACT
	R	CAACACACCAACGAAAATAGC
hsa_circ_0000514	F	AGCTTGGAACAGACTCACGG
	R	TCTCCTGCCAGTCTGACCT
hsa_circ_0008702	F	GCAACTCTCTCAGATCACAA
	R	CCAATACATGTAAATTTGTCTGG
hsa_circ_0007292	F	ATGCTTCTGAGATGATTGACAA
	R	CTTTAGTCTCCTGGTGAAGAGC
hsa_circ_0018905	F	CTGTATTCTTGCTTCGCTGCTT
	R	CTCCTCCGCTGCCTTTCC
hsa_circ_0003302	F	CTTAATGGCAGCGTTGTTACTG
	R	CATCTTTCTTTCTTAAAATGCTGAA
hsa_circ_0028540	F	GAAGCCAGCGAGGATGCC
	R	GAAGCCAGCGAGGATGCC
hsa_circ_0048467	F	ACATGGAAGGAGGCATCTCGT
	R	GCTTTGCTCTGCATCGCTG
hsa_circ_0052867	F	GCAGCTCTTTCAGAGGACTAAT
	R	TTTCATCCACAGATCAAACCTATA
hsa_circ_0070040	F	TTGGGAACTGGACTGGGATT
	R	TGTTAGTTGGGGCAGAAAAGC
hsa_circ_0000463	F	TCCCAGGTCAGGCACTCC
	R	TGCATTTCAGGAAGTCACAGTC
hsa_circ_0002131	F	ATGTTTTGGCTTTGGGGCTA
	R	TGGATGGAGGATGAGGATGGTA
hsa_circ_0040994	F	CTTTGCGATTCAACAAGTCAGG
	R	AGGCGGAGGAGGATCATTG
hsa_circ_0004069	F	GAGCGTGCCTAGCTTCTTCTG
	R	GAGCGCACCAAAGACAAACA
ATP5C1	F	GGCAGCAAAAATATGCCCGAG
	R	TTTTGCAGCACGTCAGCATC
β -actin	F	ATGTGGCCGAGGACTTTGATTGC
	R	TGTGTGGACTTGGGAGAGGACTG
U6	F	CGCTTCGGCAGCACATATAC
	R	AAATATGGAACGCTTCACGA

COL1	F	AAAGATGGACTCAACGGTCTC
	R	CATCGTGAGCCTTCTCTTGAG
Runx2	F	AGGCAGTTCCCAAGCATTTCATCC
	R	TGGCAGGTAGGTGTGGTAGTGAG
OPN	F	AGCAGGAGGAGGCAGAGCAC
	R	GTCGGCGTTTGGCTGAGAAGG
OCN	F	CTACCTGTATCAATGGCTGGG
	R	GGATTGAGCTCACACACCT
miR-508-3p	F	CCGCGCGTGATTGTAGCCTTTTGGAG
miR-1179	F	GCCGCGCGAAGCATTCTTTCATTGGT
miR-485-3p	F	GGCGTCATACACGGCTCTCCTCTCT
miR-515-5p	F	GCGCGCGTTCTCCAAAAGAAAGCACT
SATB2	F	GTACCATCCGTCGCTTCCTGAAC
	R	CGCTGTGGTGATGCCTTGACTC

Supplementary Table 4. Antibodies used in this study for western blot.

Primary or secondary	Target	Species	Concentration	Obtained from
Primary antibody	COL1	Rabbit	1:2000	AF1840, Beyotime, China
Primary antibody	Runx2	Rabbit	1:2000	ab236639, Abcam, UK
Primary antibody	OPN	Rabbit	1:2000	AF7662, Beyotime, China
Primary antibody	OCN	Rabbit	1:2000	AF6297, Beyotime, China
Primary antibody	SATB2	Rabbit	1:2000	ab92446, Abcam, UK
Primary antibody	β -actin	Mouse	1:2000	TA-09, ZSGB-BIO, China
Secondary antibody	anti-mouse-IgG	Goat	1:10000	ZB-2305, ZSGB-BIO, China
Secondary antibody	anti-rabbit IgG	Goat	1:10000	ZB-5301, ZSGB-BIO, China