

Table S1 PCR primer information of SNPs site

Gene	SNPs	primer sequences (5'-3')		bp
		Upstream primer	Downstream primer	
LOX	rs1800449	AGAAGTTCCTGCGCTCAGTA	TGGGCCTTTCATAAGTATCG	134
	rs2956540	TTCACCTGTGAAACCATTCC	GAAATGGTGTCCCTCTGCTC	152
	rs10519694	ATGCCACATCACTCCACTTG	CTGAGGAAACTTCTCTAGAC	135
	rs2303656	CTGGGCAACACAAAGAGTTC	TTCCATAACGTCTCCAGAG	141
	rs763497	ACATCTAGGCCTACATCGAG	TAAATGGCCCCAACACAAG	129
	rs3900446	AGGAAGCAAAGCTCAGGTGG	CTTGAAGTTTCCCAGTAAGG	120
LOXL1	rs2165241	AAACTGAGCTCTCAAATGCC	CTCTCAATCAACTGGCTTCC	131
	rs3825942	ACCTCCGTCTCCCAGCAAC	TAGTTCTCGTACTGGCTGAC	143
	rs2304721	TGTTTCATGTCCAATGTCCCC	CTGAGACCTAAATCTTCGGC	140
	rs12441130	AGCTTACATCTCGAGCTCTG	TTCATGCTGTTTTCCCTGCC	143
LOXL2	rs2294128	TGCCAAGTGGCCACACCTC	CATGAAGAATGTCACCTGCG	146
	rs7818494	GTTGGAAGGGAGGATAACAG	AGAATAGCGCAGACCTCAAC	140
	rs4323477	ATAGACGTTTCAGCCACAAGG	AGCCAACTTAAGAGCCTAGC	126
	rs7818416	CAAGAGATCCTCCTACTCAG	ACCTTTGGCAATTCATTGGC	148
	rs1063582	TCTCTGCCTTGTTGACCAG	AGTTCTCCTCCATGGCACAC	136
	rs2280936	AGCAGCTCTGTGGACAAACC	CTACAGCTGTGTCTAAGCTC	119
	rs2294133	CATTACCCCGAGTACTTCCA	CATCATAGTACACCTCCACC	139
	rs2280935	GGAGGGTTTCATTGGAAGAG	TGACACGTGGACAAATGCGG	127
	rs1010156	CATGAAGAATGTCACCTGCG	GTCCTCACCTCTGGCTTGTA	120
	rs142252012	CATCATAGTACACCTCCACC	ATTACCCCGAGTACTTCCAG	138
LOXL3	rs715407	GTCCCTTTGGAACCTTTAC	AAGCTTCCCACCTCGAGTTC	133
	rs6707302	CACTATGATATCCTCACCCC	AAGGCTGTGCAATGGATACC	136
	rs17010021	ACTCAGTGTCTTCGAGACAG	CTTCTCCCCACAGGCATTAC	120
	rs17010022	ACTTCTGATCTTTGCCATC	GTGAACAATCCTCAGCTGTG	128
LOXL4	rs3793692	GGATGACTGGGTTTCCTTAC	GATGGCAAGATCACCAATCC	140
	rs1983864	GATATGAGCGGACCCTCAG	ATGCTCAGACCCAAACTCAC	136
	rs7077266	TGGCATGAAGGGCCTCTATC	GGAGTTCTTATTTCGTGAGGC	151

PCR, polymerase chain reaction; SNP, single nucleotide polymorphism.

Table S2 Univariate analysis of the association between *LOX* family gene polymorphisms and single IA rupture

Gene	SNP	Genotype [†]		Dominant model		Recessive model		Additive model	
		Ruptured (n)	Unruptured (n)	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P
<i>LOX</i>	rs1800449(C>T)	86/36/11	77/36/2	1.11 (0.65–1.88)	0.704	5.09 (1.11–23.48)*	0.037*	1.30 (0.84–2.00)	0.239
	rs2956540(G>C)	75/41/17	62/46/7	0.91 (0.55–1.49)	0.696	2.26 (0.90–5.67)	0.082	1.10 (0.76–1.60)	0.618
	rs10519694(C>T)	115/15/3	86/17/12	0.46 (0.24–0.89)*	0.021*	0.20 (0.05–0.72)*	0.014*	0.51 (0.31–0.83)*	0.007*
	rs2303656(G>T)	122/11/0	111/4/0	2.50 (0.77–8.09)	0.125	–	–	2.50 (0.77–8.09)	0.125
	rs763497(A>G)	100/32/1	77/32/6	0.67 (0.39–1.16)	0.154	0.14 (0.02–1.16)	0.068	0.63 (0.38–1.02)	0.058
	rs3900446(A>G)	110/19/4	93/21/1	0.88 (0.46–1.69)	0.708	3.54 (0.39–32.09)	0.262	1.02 (0.58–1.77)	0.958
<i>LOXL1</i>	rs2165241(C>T)	108/23/2	93/20/2	0.98 (0.51–1.85)	0.947	0.86 (0.12–6.22)	0.883	0.97 (0.55–1.71)	0.920
	rs3825942(G>A)	103/26/4	83/30/2	0.76 (0.43–1.34)	0.340	1.75 (0.32–9.75)	0.522	0.85 (0.52–1.41)	0.528
	rs2304721(C>A)	77/45/11	64/39/12	0.91 (0.55–1.51)	0.722	0.77 (0.33–1.83)	0.559	0.90 (0.62–1.32)	0.600
	rs12441130(T>C)	63/54/16	53/43/19	0.95 (0.58–1.57)	0.840	0.69 (0.34–1.42)	0.313	0.89 (0.63–1.27)	0.523
<i>LOXL2</i>	rs2294128(C>T)	105/26/2	93/2/20	1.13 (0.60–2.10)	0.707	0.86 (0.12–6.22)	0.883	1.09 (0.62–1.90)	0.769
	rs7818494(A>G)	84/40/9	74/34/7	1.05 (0.63–1.77)	0.846	1.12 (0.40–3.11)	0.828	1.05 (0.70–1.58)	0.810
	rs4323477(A>G)	32/67/34	26/64/25	0.92 (0.51–1.67)	0.788	1.24 (0.69–2.23)	0.481	1.05 (0.73–1.51)	0.786
	rs7818416(G>A)	44/66/23	33/59/23	0.81 (0.47–1.40)	0.457	0.84 (0.44–1.59)	0.585	0.86 (0.60–1.24)	0.422
	rs1063582(G>T)	82/47/4	72/38/5	1.04 (0.62–1.74)	0.877	0.68 (0.18–2.60)	0.576	0.99 (0.63–1.54)	0.957
	rs2280936(C>G)	86/43/4	67/42/6	1.76 (0.46–1.28)	0.302	0.56 (0.16–2.05)	0.383	0.77 (0.49–1.19)	0.237
	rs2294133(C>T)	81/39/13	67/35/13	0.90 (0.54–1.49)	0.672	0.85 (0.38–1.92)	0.695	0.91 (0.63–1.32)	0.629
	rs2280935(A>C)	53/57/23	41/61/13	0.84 (0.50–1.40)	0.497	1.64 (0.79–3.41)	0.185	1.04 (0.72–1.50)	0.837
	rs1010156(T>C)	45/63/25	30/55/30	0.69 (0.40–1.20)	0.186	0.66 (0.36–1.20)	0.170	0.75 (0.53–1.06)	0.102
	rs142252012(G>A)	129/4/0	112/3/0	1.16 (0.24–5.28)	0.850	–	–	1.16 (0.25–5.28)	0.850
<i>LOXL3</i>	rs715407(T>G)	90/41/2	71/38/6	0.77 (0.46–1.30)	0.330	0.28 (0.06–1.40)	0.121	0.73 (0.46–1.15)	0.169
	rs6707302(C>T)	94/38/1	74/35/6	0.75 (0.44–1.28)	0.288	0.14 (0.02–1.16)	0.068	0.68 (0.43–1.10)	0.114
	rs17010021(T>A)	57/63/13	54/49/12	1.18 (0.71–1.95)	0.517	0.93 (0.41–2.13)	0.863	1.08 (0.74–1.59)	0.680
	rs17010022(C>G)	57/63/13	53/49/13	1.14 (0.69–1.88)	0.610	0.85 (0.38–1.92)	0.695	1.04 (0.71–1.52)	0.839
<i>LOXL4</i>	rs3793692(G>A)	25/69/39	26/68/21	1.26 (0.68–2.34)	0.459	1.86 (1.02–3.39)*	0.044*	1.40 (0.96–2.04)	0.082
	rs1983864(G>T)	40/73/20	32/55/28	0.90 (0.52–1.56)	0.697	0.55 (0.29–1.04)	0.066	0.78 (0.54–1.13)	0.189
	rs7077266(G>T)	95/37/1	75/36/4	0.75 (0.44–1.28)	0.294	0.21 (0.02–1.91)	0.166	0.71 (0.44–1.16)	0.173

[†], genotype presented as wild type/heterozygous/homozygous; *, P<0.05; SNP, single nucleotide polymorphism; IA, intracranial aneurysm; OR, odds ratio; CI, confidence interval; –, not available.