

**Table S1** The primers sequence of qRT-PCR

	Forward	Reverse
GADPH	ATGACATCAAGAAGGTGGTG	CATACCAGGAAATGAGCTTG
RN7SKP203	TCGCCAGGGTTGATTC	GGATGGTCGTCCTCTTCG
SMIM25	TGGGTGGAATGTCACCATCG	CAGTGGAGGCAGAAGGAAGG
RP11-482G13.1	GGCGTGTAATTGTCAGAACAGTG	CCGCTTGAGGTTCTGTGAGG
RP11-763B22.4	GGAGAGATTGGAGCGCAGAA	GTGTTCCCCAACGGCTAGTT
XLOC_055653	CTCACTGCCTGCCATACTCG	GCTGGGTTTTTCCGAGTTCC
RN7SL471P	ACTTCCCTTTTCGGGATTTCT	TAGCATATACCAGTCCCACCAG

qRT-PCR, quantitative real-time polymerase chain reaction.

**Table S2** Categorization of reads and basic characteristics of long non-coding RNAs

Sample	Raw reads	Raw bases (Gb)	Clean reads	Clean bases (Gb)	Low-quality reads rate (%)	Adapter-related reads rate (%)	Ns reads rate (%)	Clean Q30 (%)
NOCA-1	77715388	11.66	69659466	10.45	10.10	0.25	0.02	94.38
NOCA-2	72496310	10.87	65624434	9.84	9.24	0.23	0.02	94.39
NOCA-3	70721132	10.61	64707412	9.71	8.25	0.22	0.03	95.07
NOCA-4	86304168	12.95	75639296	11.35	12.05	0.29	0.02	94.14
NOCA-5	79521768	11.93	73152420	10.97	7.83	0.18	0.00	95.19
NOCA-6	85041178	12.76	77758456	11.66	8.31	0.24	0.02	94.60
NOCA-7	80209358	12.03	72655618	10.90	9.12	0.28	0.02	94.32
NOCA-8	91167662	13.68	81947418	12.29	9.83	0.27	0.02	94.28
NOCA-9	85820082	12.87	79346492	11.90	7.32	0.18	0.04	95.10
NOCA-10	90964834	13.64	83773232	12.57	7.65	0.22	0.04	95.02
SA-1	97489852	14.62	88222140	13.23	9.12	0.34	0.04	94.87
SA-2	86055606	12.91	78288938	11.74	8.85	0.16	0.02	94.53
SA-3	95289216	14.29	87965258	13.19	7.55	0.14	0.00	95.22
SA-4	101944180	15.29	92787748	13.92	8.64	0.30	0.04	94.96
SA-5	74811714	11.22	68438418	10.27	8.31	0.21	0.00	95.14
SA-6	90516132	13.58	83749498	12.56	7.25	0.19	0.04	95.16
SA-7	100324372	15.05	93094318	13.96	6.92	0.24	0.04	95.23
SA-8	72276892	10.84	65643344	9.85	8.93	0.23	0.02	94.41
SA-9	96555646	14.48	89094868	13.36	7.40	0.29	0.04	95.09
SA-10	75616706	11.34	70076310	10.51	7.12	0.18	0.04	95.09
UA-1	70084842	10.51	64233472	9.64	8.23	0.08	0.04	95.05
UA-2	90431742	13.56	83969220	12.60	7.02	0.13	0.00	95.32
UA-3	67522404	10.13	62014664	9.30	8.00	0.12	0.04	95.07
UA-4	86226774	12.93	78724208	11.81	8.60	0.10	0.00	95.08
UA-5	85946262	12.89	79714984	11.96	7.15	0.10	0.00	95.20
UA-6	90961096	13.64	84219396	12.63	7.27	0.14	0.00	95.20
UA-7	81430256	12.21	75200078	11.28	7.47	0.18	0.00	95.26
UA-8	99001656	14.85	90676132	13.60	8.22	0.18	0.00	95.09
UA-9	78463818	11.77	72007344	10.80	8.07	0.16	0.00	95.11
UA-10	85138216	12.77	78249206	11.74	7.98	0.11	0.00	95.18
NSTEMI-1	93178394	13.98	84292330	12.64	9.34	0.15	0.05	94.51
NSTEMI-2	92472096	13.87	83736836	12.56	9.21	0.19	0.05	94.56
NSTEMI-3	82211902	12.33	74939050	11.24	8.59	0.24	0.02	94.45
NSTEMI-4	88403440	13.26	79730220	11.96	9.59	0.17	0.05	94.45
NSTEMI-5	83349304	12.50	75340664	11.30	9.42	0.14	0.05	94.43
NSTEMI-6	76077804	11.41	69028666	10.35	9.11	0.11	0.05	94.49
NSTEMI-7	76625100	11.49	69235574	10.39	9.41	0.19	0.05	94.40
NSTEMI-8	81417038	12.21	73499784	11.02	9.43	0.28	0.02	94.45
NSTEMI-9	84510056	12.68	76997902	11.55	8.68	0.16	0.05	94.52
NSTEMI-10	74598160	11.19	67401024	10.11	9.45	0.15	0.05	94.42
STEMI-1	86475520	12.97	78450634	11.77	9.14	0.09	0.05	94.49
STEMI-2	75351068	11.30	68057878	10.21	9.50	0.13	0.05	94.44
STEMI-3	79991690	12.00	72159492	10.82	9.59	0.15	0.05	94.31
STEMI-4	65992710	9.90	60056280	9.01	8.85	0.15	0.00	94.44
STEMI-5	82561964	12.38	75849696	11.38	7.95	0.18	0.00	94.38
STEMI-6	78095602	11.71	70538754	10.58	9.34	0.32	0.02	94.43
STEMI-7	76417692	11.46	69710604	10.46	8.47	0.31	0.00	94.58
STEMI-8	80848554	12.13	73973576	11.10	8.29	0.21	0.00	94.48
STEMI-9	76556392	11.48	70515654	10.58	7.67	0.22	0.00	94.49
STEMI-10	89874496	13.48	82740772	12.41	7.84	0.10	0.00	94.60

NOCA, non-obstructive coronary atherosclerosis; SA, stable angina; UA, unstable angina; NSTEMI, non-ST-segment elevation acute myocardial infarction; STEMI, ST-segment elevation acute myocardial infarction.

**Table S3** Summary of base calling and alignments

Sample	Total reads	Total mapped	Multiple mapped	Uniquely mapped	Reads map to "+"	Reads map to "-"	Non-splice reads	Splice reads	Reads mapped in proper pairs
NOCA-1	69,659,466	65,928,700 (94.64%)	1,928,386 (2.77%)	64,000,314 (91.88%)	32,059,444 (46.02%)	31,940,870 (45.85%)	52,610,532 (75.53%)	11,389,782 (16.35%)	59,249,984 (85.06%)
NOCA-2	65,624,434	61,846,924 (94.24%)	2,087,562 (3.18%)	59,759,362 (91.06%)	29,930,719 (45.61%)	29,828,643 (45.45%)	50,766,461 (77.36%)	8,992,901 (13.70%)	54,287,042 (82.72%)
NOCA-3	64,707,412	60,798,357 (93.96%)	1,805,409 (2.79%)	58,992,948 (91.17%)	29,505,057 (45.6%)	29,487,891 (45.57%)	49,280,223 (76.16%)	9,712,725 (15.01%)	50,486,876 (78.02%)
NOCA-4	75,639,296	71,556,359 (94.60%)	1,918,588 (2.54%)	69,637,771 (92.07%)	34,897,804 (46.14%)	34,739,967 (45.93%)	5,6854,469 (75.17%)	12,783,302 (16.90%)	61,615,012 (81.46%)
NOCA-5	73,152,420	68,880,813 (94.16%)	2,164,156 (2.96%)	66,716,657 (91.20%)	33,380,047 (45.63%)	33,336,610 (45.57%)	55,889,604 (76.40%)	10,827,053 (14.80%)	59,734,248 (81.66%)
NOCA-6	77,758,456	73,294,138 (94.26%)	1,962,098 (2.52%)	71,332,040 (91.74%)	35,678,233 (45.88%)	35,653,807 (45.85%)	60,150,540 (77.36%)	11,181,500 (14.38%)	66,078,388 (84.98%)
NOCA-7	72,655,618	68,602,821 (94.42%)	2,128,529 (2.93%)	66,474,292 (91.49%)	33,312,555 (45.85%)	33,161,737 (45.64%)	57,768,862 (79.51%)	8,705,430 (11.98%)	61,525,730 (84.68%)
NOCA-8	81,947,418	77,353,319 (94.39%)	2,807,205 (3.43%)	74,546,114 (90.97%)	37,341,944 (45.57%)	37,204,170 (45.40%)	62,425,793 (76.18%)	12,120,321 (14.79%)	67,377,964 (82.22%)
NOCA-9	79,346,492	75,606,510 (95.29%)	2,256,014 (2.84%)	73,350,496 (92.44%)	36,753,935 (46.32%)	36,596,561 (46.12%)	61,187,455 (77.11%)	12,163,041 (15.33%)	67,761,372 (85.40%)
NOCA-10	83,773,232	79,531,291 (94.94%)	2,259,956 (2.70%)	77,271,335 (92.24%)	38,737,334 (46.24%)	38,534,001 (46.00%)	63,705,091 (76.04%)	13,566,244 (16.19%)	70,953,246 (84.70%)
SA-1	88,222,140	83,208,481 (94.32%)	2,581,291 (2.93%)	80,627,190 (91.39%)	40,381,919 (45.77%)	40,245,271 (45.62%)	68,661,202 (77.83%)	11,965,988 (13.56%)	74,473,272 (84.42%)
SA-2	78,288,938	74,509,651 (95.17%)	1,613,408 (2.06%)	72,896,243 (93.11%)	36,498,678 (46.62%)	36,397,565 (46.49%)	58,211,578 (74.35%)	14,684,665 (18.76%)	67,871,306 (86.69%)
SA-3	87,965,258	83,914,143 (95.39%)	2,093,931 (2.38%)	81,820,212 (93.01%)	40,947,006 (46.55%)	40,873,206 (46.47%)	67,289,516 (76.50%)	14,530,696 (16.52%)	74,970,720 (85.23%)
SA-4	92,787,748	87,423,676 (94.22%)	2,400,226 (2.59%)	85,023,450 (91.63%)	42,581,027 (45.89%)	42,442,423 (45.74%)	74,584,275 (80.38%)	10,439,175 (11.25%)	76,718,280 (82.68%)
SA-5	68,438,418	64,613,760 (94.41%)	1,969,171 (2.88%)	62,644,589 (91.53%)	31,340,601 (45.79%)	31,303,988 (45.74%)	53,893,299 (78.75%)	8,751,290 (12.79%)	56,746,854 (82.92%)
SA-6	83,749,498	79,773,674 (95.25%)	2,171,833 (2.59%)	77,601,841 (92.66%)	38,888,915 (46.43%)	38,712,926 (46.22%)	64,336,791 (76.82%)	13,265,050 (15.84%)	71,836,468 (85.78%)
SA-7	93,094,318	88,306,083 (94.86%)	2,803,850 (3.01%)	85,502,233 (91.84%)	42,840,484 (46.02%)	42,661,749 (45.83%)	72,354,035 (77.72%)	13,1481,98 (14.12%)	80,028,960 (85.97%)
SA-8	65,643,344	61,651,422 (93.92%)	2,146,432 (3.27%)	59,504,990 (90.65%)	29,792,215 (45.38%)	29,712,775 (45.26%)	50,667,568 (77.19%)	8,837,422 (13.46%)	55,064,740 (83.88%)
SA-9	89,094,868	84,511,859 (94.86%)	2,459,272 (2.76%)	82,052,587 (92.10%)	41,119,159 (46.15%)	40,933,428 (45.94%)	68,858,253 (77.29%)	13,194,334 (14.81%)	75,145,790 (84.34%)
SA-10	70,076,310	66,357,847 (94.69%)	1,748,312 (2.49%)	64,609,535 (92.20%)	32,334,907 (46.14%)	32,274,628 (46.06%)	52,257,586 (74.57%)	12,351,949 (17.63%)	59,093,774 (84.33%)
UA-1	64,233,472	61,159,400 (95.21%)	1,648,473 (2.57%)	59,510,927 (92.65%)	29,773,602 (46.35%)	29,737,325 (46.30%)	49,221,699 (76.63%)	10,289,228 (16.02%)	53,446,652 (83.21%)
UA-2	83,969,220	79,779,746 (95.01%)	1,964,755 (2.34%)	77,814,991 (92.67%)	38,917,198 (46.35%)	38,897,793 (46.32%)	64,835,211 (77.21%)	12,979,780 (15.46%)	70,927,142 (84.47%)
UA-3	62,014,664	58,613,851 (94.52%)	1,519,372 (2.45%)	57,094,479 (92.07%)	28,552,816 (46.04%)	28,541,663 (46.02%)	48,651,774 (78.45%)	8,442,705 (13.61%)	52,192,486 (84.16%)
UA-4	78,724,208	75,254,054 (95.59%)	1,652,188 (2.10%)	73,601,866 (93.49%)	36,832,821 (46.79%)	36,769,045 (46.71%)	58,460,445 (74.26%)	15,141,421 (19.23%)	67,700,074 (86.00%)
UA-5	79,714,984	76,242,151 (95.64%)	2,004,383 (2.51%)	74,237,768 (93.13%)	37,154,471 (46.61%)	37,083,297 (46.52%)	60,924,961 (76.43%)	13,312,807 (16.70%)	68,408,826 (85.82%)
UA-6	84,219,396	79,968,130 (94.95%)	2,132,466 (2.53%)	77,835,664 (92.42%)	38,951,439 (46.25%)	38,884,225 (46.17%)	64,084,623 (76.09%)	13,751,041 (16.33%)	72,424,488 (86.00%)
UA-7	75,200,078	71,008,760 (94.43%)	2,276,214 (3.03%)	68,732,546 (91.40%)	34,388,437 (45.73%)	34,344,109 (45.67%)	58,527,611 (77.83%)	10,204,935 (13.57%)	63,554,858 (84.51%)
UA-8	90,676,132	84,986,340 (93.73%)	2,959,081 (3.26%)	82,027,259 (90.46%)	41,027,013 (45.25%)	41,000,246 (45.22%)	69,956,065 (77.15%)	12,071,194 (13.31%)	74,826,422 (82.52%)
UA-9	72,007,344	68,636,807 (95.32%)	2,042,600 (2.84%)	66,594,207 (92.48%)	33,317,722 (46.27%)	33,276,485 (46.21%)	54,640,165 (75.88%)	11,954,042 (16.60%)	62,044,470 (86.16%)
UA-10	78,249,206	74,446,483 (95.14%)	2,456,102 (3.14%)	71,990,381 (92.00%)	36,010,634 (46.02%)	35,979,747 (45.98%)	59,981,603 (76.65%)	12,008,778 (15.35%)	65,608,280 (83.85%)
NSTEMI-1	84,292,330	79,489,113 (94.30%)	2,208,599 (2.62%)	77,280,514 (91.68%)	38,699,507 (45.91%)	38,581,007 (45.77%)	62,142,661 (73.72%)	15,137,853 (17.96%)	70,139,442 (83.21%)
NSTEMI-2	83,736,836	77,985,333 (93.13%)	2,349,407 (2.81%)	75,635,926 (90.33%)	37,843,178 (45.19%)	37,792,748 (45.13%)	64,429,936 (76.94%)	11,205,990 (13.38%)	68,554,376 (81.87%)
NSTEMI-3	74,939,050	71,302,757 (95.15%)	2,169,825 (2.90%)	69,132,932 (92.25%)	34,601,066 (46.17%)	34,531,866 (46.08%)	56,408,314 (75.27%)	12,724,618 (16.98%)	64,152,264 (85.61%)
NSTEMI-4	79,730,220	74,644,611 (93.62%)	1,831,229 (2.30%)	72,813,382 (91.32%)	36,435,337 (45.70%)	36,378,045 (45.63%)	60,618,183 (76.03%)	12,195,199 (15.30%)	65,683,936 (82.38%)
NSTEMI-5	75,340,664	70,907,132 (94.12%)	1,924,431 (2.55%)	68,982,701 (91.56%)	34,527,879 (45.83%)	34,454,822 (45.73%)	55,350,952 (73.47%)	13,631,749 (18.09%)	61,146,386 (81.16%)
NSTEMI-6	69,028,666	65,034,108 (94.21%)	1,488,562 (2.16%)	63,545,546 (92.06%)	31,803,533 (46.07%)	31,742,013 (45.98%)	51,373,385 (74.42%)	12,172,161 (17.63%)	58,469,418 (84.70%)
NSTEMI-7	69,235,574	63,901,969 (92.30%)	1,919,156 (2.77%)	61,982,813 (89.52%)	31,020,004 (44.80%)	30,962,809 (44.72%)	51,174,855 (73.91%)	10,807,958 (15.61%)	55,712,110 (80.47%)
NSTEMI-8	73,499,784	68,841,105 (93.66%)	2,283,559 (3.11%)	66,557,546 (90.55%)	33,318,500 (45.33%)	33,239,046 (45.22%)	57,790,837 (78.63%)	8,766,709 (11.93%)	61,506,310 (83.68%)
NSTEMI-9	76,997,902	72,544,132 (94.22%)	2,431,656 (3.16%)	70,112,476 (91.06%)	35,098,759 (45.58%)	35,013,717 (45.47%)	57,014,188 (74.05%)	13,098,288 (17.01%)	64,509,192 (83.78%)
NSTEMI-10	67,401,024	63,300,760 (93.92%)	2,240,076 (3.32%)	61,060,684 (90.59%)	30,552,071 (45.33%)	30,508,613 (45.26%)	49,864,545 (73.98%)	11,196,139 (16.61%)	54,843,212 (81.37%)
STEMI-1	78,450,634	73,974,460 (94.29%)	2,105,500 (2.68%)	71,868,960 (91.61%)	35,966,393 (45.85%)	35,902,567 (45.76%)	56,602,316 (72.15%)	15,266,644 (19.46%)	65,051,702 (82.92%)
STEMI-2	68,057,878	64,124,707 (94.22%)	2,102,345 (3.09%)	62,022,362 (91.13%)	31,041,827 (45.61%)	30,980,535 (45.52%)	48,384,815 (71.09%)	13,637,547 (20.04%)	56,628,216 (83.21%)
STEMI-3	72,159,492	67,260,163 (93.21%)	2,762,900 (3.83%)	64,497,263 (89.38%)	32,267,891 (44.72%)	32,229,372 (44.66%)	53,935,383 (74.74%)	10,561,880 (14.64%)	58,400,784 (80.93%)
STEMI-4	60,056,280	56,565,944 (94.19%)	1,629,775 (2.71%)	54,936,169 (91.47%)	27,484,872 (45.77%)	27,451,297 (45.71%)	45,256,078 (75.36%)	9,680,091 (16.12%)	50,713,204 (84.44%)
STEMI-5	75,849,696	71,221,689 (93.90%)	2,558,025 (3.37%)	68,663,664 (90.53%)	34,348,149 (45.28%)	34,315,515 (45.24%)	58,591,997 (77.25%)	10,071,667 (13.28%)	63,271,702 (83.42%)
STEMI-6	70,538,754	65,830,061 (93.32%)	2,376,427 (3.37%)	63,453,634 (89.96%)	31,770,364 (45.04%)	31,683,270 (44.92%)	54,593,444 (77.39%)	8,860,190 (12.56%)	58,173,370 (82.47%)
STEMI-7	69,710,604	66,279,594 (95.08%)	1,820,365 (2.61%)	64,459,229 (92.47%)	32,250,096 (46.26%)	32,209,133 (46.20%)	53,569,947 (76.85%)	10,889,282 (15.62%)	58,763,538 (84.30%)
STEMI-8	73,973,576	69,662,065 (94.17%)	2,175,398 (2.94%)	67,486,667 (91.23%)	33,747,619 (45.62%)	33,739,048 (45.61%)	58,812,962 (79.51%)	8,673,705 (11.73%)	61,192,716 (82.72%)
STEMI-9	70,515,654	66,207,697 (93.89%)	2,319,950 (3.29%)	63,887,747 (90.60%)	31,968,769 (45.34%)	31,918,978 (45.27%)	52,719,428 (74.76%)	11,168,319 (15.84%)	59,263,702 (84.04%)
STEMI-10	82,740,772	78,594,480 (94.99%)	2,605,764 (3.15%)	75,988,716 (91.84%)	38,009,127 (45.94%)	37,979,589 (45.90%)	61,887,971 (74.8%)	14,100,745 (17.04%)	70,339,768 (85.01%)

NOCA, non-obstructive coronary atherosclerosis; SA, stable angina; UA, unstable angina; NSTEMI, non-ST-segment elevation acute myocardial infarction; STEMI, ST-segment elevation acute myocardial infarction.