

Additional table S1 Primer and probe sequence and PCR and LDR product length of *PAPP-A* variants

Variant	Primer or Probe	Sequence(5'-3')	PCR or LDR length
rs3747823 G/A	rs3747823-up	CAAAGCAAGCAAATGTGAA	159
	rs3747823-low	ATGGCTGGACATGGAAAAGT	
	rs3747823_modify	P-TTCTTCATCTTCAAATGAGATTTCTTTTTTT TTTTTTTTTTTTTTTTTGCATCACTCA-FAM	
	rs3747823-A	TTTTTTTTTTTTTTTTTCTCTGTCTGAGTCTCT GT	150
rs3747823-G	TTTTTTTTTTTTTTTTTCTCTGTCTGAGTCT CTGC	152	
rs7020782 A/C	rs7020782-up	GCACTTCGCATGTGAGAAAA	186
	rs7020782-low	GAGCTCAGCACCTGCACATA	
	rs7020782_modify	P-AAGCATTCTCCACAGCCAGCTCTGGTTTTTT TTTTTTTTTTTTTTTTTGCATCACTCA-FAM	
	rs7020782-A	TTTTTTTTTTTTTTTTTTTTTTTTTTTGCCTCGCT GCTGGAGCAATTGAGAT	165
rs7020782-C	TTTTTTTTTTTTTTTTTTTTTTTTTTTGCCTCG CTGCTGGAGCAATTGAGAG	167	
rs13290387 G/C	rs13290387-up	GGGAGAATCCTGGTGCAGTA	249
	rs13290387-low	AAATGGATGAGCGCTTGACT	
	rs13290387_modify	P-AAAGACCCATAAAAATAAAAACCTTTTTT TTTTTTTTTTTTTTTTTGCATCACTCA-FAM	
	rs13290387-C	TTTTTTTTTTTTTTTTTTTTTTTTTTTGTIAC TCAAATGAAATGATACATGGG	170
rs13290387-G	TTTTTTTTTTTTTTTTTTTTTTTTTTTGTI ACTCAAATGAAATGATACATGGC	172	

PCR, polymerase chain reaction; LDR, ligase detection reaction