Supplementary materials

Table S1 The primer design for miRNA RT-PCR

prostate related miRNAs	miRNA sequence	primer	reference
Let-7c-5p	TGAGGTAGTAGGTTGTATGGTT	TGAGGTAGTAGGTTGTATGGTT	1
Let-7e-5p	TGAGGTAGGAGGTTGTATAGTT	TGAGGTAGGAGGTTGTATAGTT	1
miR-100-5p	AACCCGTAGATCCGAACTTGTG	ACCCGTAGATCCGAACTTGTG	1, 2
miR-101-3p	TACAGTACTGTGATAACTGAA	CGGTACAGTACTGTGATAACTGAA	3
miR-103-3p	AGCAGCATTGTACAGGGCTATGA	GCAGCATTGTACAGGGCTATG	4
miR-106a-5p	CAAAGTGCTAACAGTGCAGGTAG	AAGTGCTAACAGTGCAGGTAG	1,3
miR-106b-5p	TAAAGTGCTGACAGTGCAGAT	TAAAGTGCTGACAGTGCAGAT	3
miR-107-3p	AGCAGCATTGTACAGGGCTATCA	GCAGCATTGTACAGGGCTATC	1, 3, 4
miR-10a-5p	TACCCTGTAGATCCGAATTTGTG	TACCCTGTAGATCCGAATTTGTG	3, 5
miR-125a-5p	TCCCTGAGACCCTTTAACCTGTGA	CCTGAGACCCTTTAACCTGTG	3
miR-125b-5p	TCCCTGAGACCCTAACTTGTGA	TCCCTGAGACCCTAACTTGTG	2, 3
miR-126-3p	TCGTACCGTGAGTAATAATGCG	TCGTACCGTGAGTAATAATGCG	3
miR-126-5p(*)	CATTATTACTTTTGGTACGCG	GGCATTATTACTTTTGGTACGCG	3
miR-128-3p	TCACAGTGAACCGGTCTCTTT	TCACAGTGAACCGGTCTCTT	3
miR-141-3p	TAACACTGTCTGGTAAAGATGG	CGTAACACTGTCTGGTAAAGATGG	1, 2, 3
miR-143-3p	TGAGATGAAGCACTGTAGCTC	TGAGATGAAGCACTGTAGCTC	2, 3
miR-145a-5p	GTCCAGTTTTCCCAGGAATCCCT	CCAGTTTTCCCAGGAATCCC	1, 3
miR-146a-5p	TGAGAACTGAATTCCATGGGTT	TGAGAACTGAATTCCATGGGTT	3
miR-148a-3p	TCAGTGCACTACAGAACTTTGT	TCAGTGCACTACAGAACTTTGT	3
miR-151-3p	CTAGACTGAGGCTCCTTGAGG	TAGACTGAGGCTCCTTGAGG	6
miR-155-5p	TTAATGCTAATTGTGATAGGGGT	GTTAATGCTAATTGTGATAGGGGT	7
miR-16-5p	TAGCAGCACGTAAATATTGGCG	TAGCAGCACGTAAATATTGGCG	3, 4
miR-181a-5p	AACATTCAACGCTGTCGGTGAGT	CATTCAACGCTGTCGGTGAG	3
miR-182-5p	TTTGGCAATGGTAGAACTCACACCG	TGGCAATGGTAGAACTCACAC	3
miR-194-5p	TGTAACAGCAACTCCATGTGGA	TGTAACAGCAACTCCATGTGG	3
miR-195a-5p	TAGCAGCACAGAAATATTGGC	TAGCAGCACAGAAATATTGGC	3
miR-200a-3p	TAACACTGTCTGGTAACGATGT	TAACACTGTCTGGTAACGATGT	3
miR-200b-3p	TAATACTGCCTGGTAATGATGA	CGTAATACTGCCTGGTAATGATGA	3
miR-200c-3p	TAATACTGCCGGGTAATGATGGA	TAATACTGCCGGGTAATGATGG	3
miR-203-3p	GTGAAATGTTTAGGACCACTAG	CGGTGAAATGTTTAGGACCACTAG	3
miR-205-5p	TCCTTCATTCCACCGGAGTCTG	TCCTTCATTCCACCGGAGTC	2, 3
miR-20a-5p	TAAAGTGCTTATAGTGCAGGTAG	TAAAGTGCTTATAGTGCAGGTAG	1, 3, 8
miR-21a-5p	TAGCTTATCAGACTGATGTTGA	CGGTAGCTTATCAGACTGATGTTGA	1, 3
miR-210-3p	CTGTGCGTGTGACAGCGGCTGA	TGCGTGTGACAGCGGCTGA	3
miR-214-3p	ACAGCAGGCACAGACAGGCAGT	AGCAGGCACAGACAGGCAG	3
miR-218-5p	TTGTGCTTGATCTAACCATGT	CGTTGTGCTTGATCTAACCATGT	3

miR-22-3p	AAGCTGCCAGTTGAAGAACTGT	AGCTGCCAGTTGAAGAACTG	3
miR-221-3p	AGCTACATTGTCTGCTGGGTTTC	CTACATTGTCTGCTGGGTTTC	1, 3
miR-222-3p	AGCTACATCTGGCTACTGGGT	AGCTACATCTGGCTACTGGG	3
miR-223-3p	TGTCAGTTTGTCAAATACCCCA	TGTCAGTTTGTCAAATACCCCA	1, 3
miR-224-5p	TAAGTCACTAGTGGTTCCGTT	TAAGTCACTAGTGGTTCCGTT	3
miR-23a-3p	ATCACATTGCCAGGGATTTCC	ATCACATTGCCAGGGATTTCC	3
miR-23b-3p	ATCACATTGCCAGGGATTACC	ATCACATTGCCAGGGATTACC	3
miR-24-3p	TGGCTCAGTTCAGCAGGAACAG	GCTCAGTTCAGCAGGAACAG	1, 3
miR-25-3p	CATTGCACTTGTCTCGGTCTGA	CATTGCACTTGTCTCGGTCTG	3
miR-26a-5p	TTCAAGTAATCCAGGATAGGCT	TTCAAGTAATCCAGGATAGGCT	1, 3
miR-26b-5p	TTCAAGTAATTCAGGATAGGT	CGGTTCAAGTAATTCAGGATAGGT	1
miR-27b-3p	TTCACAGTGGCTAAGTTCTGC	TTCACAGTGGCTAAGTTCTGC	3
miR-296-5p	AGGGCCCCCCCTCAATCCTGT	GCCCCCCCTCAATCCTG	2, 3
miR-298-5p	GGCAGAGGAGGGCTGTTCTTCCC	CAGAGGAGGGCTGTTCTTC	1
miR-29a-3p	TAGCACCATCTGAAATCGGTTA	TAGCACCATCTGAAATCGGTTA	3
miR-301a-3p	CAGTGCAATAGTATTGTCAAAGC	CAGTGCAATAGTATTGTCAAAGC	3
miR-30b-5p	TGTAAACATCCTACACTCAGCT	TGTAAACATCCTACACTCAGCT	3
miR-30c-5p	TGTAAACATCCTACACTCTCAGC	TGTAAACATCCTACACTCTCAGC	1, 3
miR-31-5p	AGGCAAGATGCTGGCATAGCTG	GCAAGATGCTGGCATAGCTG	3
miR-320-3p	AAAAGCTGGGTTGAGAGGGCGA	AAAAGCTGGGTTGAGAGGGC	3
miR-328-3p	CTGGCCCTCTCTGCCCTTCCGT	CCCTCTCTGCCCTTCCG	4
miR-330-5p	TCTCTGGGCCTGTGTCTTAGGC	TCTCTGGGCCTGTGTCTTAG	3
miR-331-3p	GCCCCTGGGCCTATCCTAGAA	CCCTGGGCCTATCCTAGA	3
miR-345-5p	GCTGACCCCTAGTCCAGTGCTT	CTGACCCCTAGTCCAGTGC	3
miR-346-5p	TGTCTGCCCGAGTGCCTGCCTCT	TGCCCGAGTGCCTGCCTCT	1
miR-34a-5p	TGGCAGTGTCTTAGCTGGTTGT	GGCAGTGTCTTAGCTGGTTG	3, 9
miR-34b-5p	AGGCAGTGTAATTAGCTGATTGT	AGGCAGTGTAATTAGCTGATTGT	3, 4
miR-34c-5p	AGGCAGTGTAGTTAGCTGATTGC	GGCAGTGTAGTTAGCTGATTGC	3, 9
miR-375-3p	TTTGTTCGTTCGGCTCGCGTGA	TTTGTTCGTTCGGCTCGCGT	1, 3
miR-449a-5p	TGGCAGTGTATTGTTAGCTGGT	TGGCAGTGTATTGTTAGCTGG	3, 9
miR-451-5p	AAACCGTTACCATTACTGAGTT	CGGAAACCGTTACCATTACTGAGTT	1
miR-485-3p	AGTCATACACGGCTCTCCTCTC	AGTCATACACGGCTCTCCTC	4
miR-486-5p	TCCTGTACTGAGCTGCCCCGAG	CTGTACTGAGCTGCCCCGA	4
miR-574-3p	CACGCTCATGCACACACCCACA	GCTCATGCACACACCCACA	1, 4
miR-7a-5p	TGGAAGACTAGTGATTTTGTTGT	CGTGGAAGACTAGTGATTTTGTTGT	3
miR-7a-2-3p	CAACAAGTCCCAGTCTGCCACA	ACAAGTCCCAGTCTGCCACA	7
miR-92a-3p	TATTGCACTTGTCCCGGCCTG	TATTGCACTTGTCCCGGCCTG	3, 4
miR-92b-3p	TATTGCACTCGTCCCGGCCTCC	TATTGCACTCGTCCCGGCCTC	4
miR-93-5p	CAAAGTGCTGTTCGTGCAGGTAG	AAGTGCTGTTCGTGCAGGTAG	1
miR-96-5p	TTTGGCACTAGCACATTTTTGCT	TTTGGCACTAGCACATTTTTGC	3
miR-99a-5p	AACCCGTAGATCCGATCTTGTG	ACCCGTAGATCCGATCTTGTG	3
U6		CGCAAATTCGTGAAGCGTTCC	

References

1. Kuner R, Brase J C, Sültmann H, Wuttig D. microRNA biomarkers in body fluids of prostate cancer patients. Methods (San Diego, Calif.), 2013, 59(1): 132–137 doi:10.1016/j.ymeth.2012.05.004 PMID:22652624

2. Mitchell P S, Parkin R K, Kroh E M, Fritz B R, Wyman S K, Pogosova-Agadjanyan E L, Peterson A, Noteboom J, O'Briant K C, Allen A, Lin D W, Urban N, Drescher C W, Knudsen B S, Stirewalt D L, Gentleman R, Vessella R L, Nelson P S, Martin D B, Tewari M. Circulating microRNAs as stable blood-based markers for cancer detection. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105(30): 10513–10518 doi:10.1073/pnas.0804549105 PMID:18663219

3. Casanova-Salas I, Rubio-Briones J, Fernández-Serra A, López-Guerrero J A. miRNAs as biomarkers in prostate cancer. Clinical & Translational Oncology, 2012, 14(11): 803–811 doi:10.1007/s12094-012-0877-0 PMID:22855165

4. Lodes M J, Caraballo M, Suciu D, Munro S, Kumar A, Anderson B. Detection of cancer with serum miRNAs on an oligonucleotide microarray. PLoS ONE, 2009, 4(7): e6229 doi:10.1371/journal.pone.0006229 PMID:19597549

5. Waltering K K, Porkka K P, Jalava S E, Urbanucci A, Kohonen P J, Latonen L M, Kallioniemi O P, Jenster G, Visakorpi T. Androgen regulation of micro-RNAs in prostate cancer. Prostate, 2011, 71(6): 604–614 doi:10.1002/pros.21276 PMID:20945501

6. Chiyomaru T, Yamamura S, Zaman M S, Majid S, Deng G, Shahryari V, Saini S, Hirata H, Ueno K, Chang I, Tanaka Y, Tabatabai Z L, Enokida H, Nakagawa M, Dahiya R. Genistein suppresses prostate cancer growth through inhibition of oncogenic microRNA-151. PLoS ONE, 2012, 7(8): e43812 doi:10.1371/journal.pone.0043812 PMID:22928040

7. Hessvik N P, Phuyal S, Brech A, Sandvig K, Llorente A. Profiling of microRNAs in exosomes released from PC-3 prostate cancer cells. Biochimica et Biophysica Acta-Gene Regulatory Mechanisms, 2012, 1819(11–12): 1154–1163 doi:10.1016/j.bbagrm.2012.08.016

8. Klinge C M. Estrogen regulation of microRNA expression. Current Genomics, 2009, 10(3): 169–183 doi:10.2174/138920209788185289 PMID:19881910

9. Östling P, Leivonen S K, Aakula A, Kohonen P, Mäkelä R, Hagman Z, Edsjö A, Kangaspeska S, Edgren H, Nicorici D, Bjartell A, Ceder Y, Perälä M, Kallioniemi O. Systematic analysis of microRNAs targeting the androgen receptor in prostate cancer cells. Cancer Research, 2011, 71(5): 1956–1967 doi:10.1158/0008-5472.CAN-10-2421 PMID:21343391

Table S2 Primer design for Drosha and Dicer1 RT-PCR

primer name	sequence
Q-mDrosha-S	GAGCCTAGAGGAAGCCAAACA
Q-mDrosha-AS	GCCGGACGTGAGTGAAGAT
Q-dicer1-S3	GCAAGGAATGGACTCTGAGC

Q-dicer1-AS3	GGGGACTTCGATATCCTCTTC
Q-mActb-S	CTTTTCCAGCCTTCCTTCTTG
Q-mActb-AS	CAGCACTGTGTTGGCATAGAG