

**Supplementary Table S1.** List of primers used to study mRNAs

Primer	Transcript	Sequence	Positive control	TA
ZMYND10-F	NM_015896.4	TGGAGCGAGAAAACAGAGGC	Ciliated cells	60°C
ZMYND10-R		ATTCTGGCATCGTGAGCAGC		
TEKT2-F	NM_014466.3	AACCATCGCTGCCCTGAAG	Ciliated cells	58°C
TEKT2-R		CATGGAGTTGGCCTTGACAG		
SPATA33-F	NM_001271907.2	CTGATGTAAAGCAAAAGTCCAGC	PBMC	60°C
SPATA33-R		GGAAGTGCAGTACTAGCG		
RSPH6A-F	NM_030785.4	CGTGAACGCCCCGAAAGATC	Testis	60°C
RSPH6A-R		CGCCCTCCTCCTCACTAAAC		
CATSPER3-F	NM_178019.3	TCTCAACACCGTCACCAGC	Testis	60°C
CATSPER3-R		GCATTGATGTGACAGTGC		
CATSPER2-F	NM_172095.4	CCCTCAAGAGCATGACCTTCC	PBMC	58/60°C
CATSPER2-R		ACTCTGAGAAGACGTAGACACC		
BSCL2-F	NM_001122955.4	TCCCTGTTGCCAATGTCTCG	Ciliated cells	60°C
BSCL2-R		AGAAGTGGAGATGATTGCGCC		
IQCG-F	NM_032263.5	ATCCCGGAAACTCTAGAGCC	Ciliated cells	59°C
IQCG-R		TGATTGTTGAGGCCATTGGAAG		
CFAP43-F	NM_025145.7	AAACGCCGACCAAGGATTTC	Ciliated cells	60°C
CFAP43-R		AGATCCTGGTAGTTCTCCGAAAG		
PLAG1-F	NM_002655.3	CAACAAGACTGCACCAAGGC	PBMC	59°C
PLAG1-R		AGTTCCTGCCACATTCTTCGC		
CFAP44-F	NM_001164496.2	GCCTTGGACTGCTCTGTTCG	Ciliated cells	58°C
CFAP44-R		GCTCCAGTGAAGTTTACCATTTCG		
QRICH2-F	NM_001388453.1	CCATCAGGTCAGCACGCT	Testis	60°C
QRICH2-R		TGCTGGTGGTGATGTTGAGC		
TTC21A-F	NM_001366900.1	CATGAAACTGGACAAGGATGGC	Ciliated cells	60°C
TTC21A-R		CCTTGATGCTGGAGAAGTGAAG		
KRT34-F	NM_021013	GCTGACGGAGAGCGAGGCCAC	Ciliated cells	62°C
KRT34-R		CCGGGCACGCACGTCCAGCA		
CRHR1-F	NM_001145146	AGCACGCATGTCCCTCCAAGGCTGT	Ciliated cells	62°C
CRHR1-R		TCACGAGTTGCCCATGATGCCCCA		
LRRC6-F	NM_012472.6	GCCATGGGCTGGATCAC	Ciliated cells	60°C
LRRC6-R		TGCTGATGCAACGAGAGTTC		
HIP1-F	NM_005338.7	CATGAGAAAGGGGCACAGAC	PBMC	59°C
HIP1-R		TTCAGGTAGATGCTGCACAG		
CCDC40-F	NM_017950.4	TTAGGCCCCGTCGGAGCAAATGG	Ciliated cells	60°C
CCDC40-R		ACTGGCTCCTGCGAGACGAACT		

TA- annealing temperature

**Supplementary Table S1 (continuation).** List of primers used to study mRNAs

Primer	Transcript	Sequence	Positive control	TA
DRC1-F	NM_145038.5	GAGCCTTTGATGTGGACAG	Ciliated cells	60°C
DRC1-R		TCTGTGTGGCGGACTTCTG		
USP11-F	NM_004651.3	CCGCAAGCCAGAGCAGCACC	Ciliated cells	60°C
USP11-R		TGCGCTCCCGCAGGTAGACA		
GAPDH-F	NM_001289745.2	AGGTCGGAGTCAACGGATT	-	58°C/60°C
GAPDH-R		TGGAATTTGCCATGGGTGGA		
B2M -F	NM_004048	TGGGTTTCATCCATCCGACA	-	58°C/60°C
B2M -R		ACGGCAGGCATACTCATCTT		

TA- annealing temperature

**Supplementary Table S2.** List of the mRNA highest score corresponding target microRNA

mRNA	Highest score corresponding target microRNA
QRICH2	-
LRRC6	miR-3664-5p
RSPH6A	miR-2110
KRT34	-
CRHR1	-
TEKT2	miR-4660
CATSPER3	miR-492
CFAP44	miR-4425
HIP1	miR-4731
IQCG	miR-4514
SPATA33	miR-518c-5p

**Supplementary Table S3.** List of the primers used for the selected microRNAs

Primer	Sequence	Length (BP)
miR-4660-F	GCAGCTCTGGTGGAAAATG	19
miR-4660-R	GGTCCAGTTTTTTTTTTTTTCTC	25
miR-518c-5p-F	TCTCTGGAGGGAAGCAC	17
miR-518c-5p-R	GTCCAGTTTTTTTTTTTCAGAAAG	28
miR-2110-F	GGAAACGGCCGCTGA	15
miR-2110-R	GGTCCAGTTTTTTTTTTTCACT	26
miR-492-F	GACCTGCGGGACAAG	15
miR-492-R	GGTCCAGTTTTTTTTTTTAAGAATC	29
miR-4514-F	GCAGACAGGCAGGATTG	17
miR-4514-R	GGTCCAGTTTTTTTTTTTCCC	25
miR-4425-F	CAGTGTTGGGATTCAGCAG	19
miR-4425-R	GGTCCAGTTTTTTTTTTTATGGT	27
miR-572-F	CCGCTCGGCGGT	12
miR-572-R	AGTTTTTTTTTTTGGGCA	23
miR-3664-5p-F	GCAGAACTCTGTCTCACTCA	21
miR-3664-5p-R	CAGGTCCAGTTTTTTTTTTTACT	27
miR-4731-5p-F	TGGGGGCCACATGAG	15
miR-4731-5p-R	GTCCAGTTTTTTTTTTTCACAC	26