

SUPPLEMENTAL MATERIAL

Table S1. Human specimen information.

Number	Age	Sex	Cause of death	RNA amount (ng/μl) SN/RA	RNA quality (RIN) SN/RA	Use
1	29	M	Road accident	100.60/231.90	6.1/7.6	qPCR
2	22	M	Road accident	30.98/301.40	8.0/7.7	qPCR
3	66	M	Suicide	47.48/285.70	5.2/4.7	qPCR
4	19	M	Suicide	114.11/389.00	6.4/7.2	qPCR
5	60	M	Sudden death	25.4/123.25	7.2/6.5	qPCR
6	54	M	Intracranial haemorrhage	164.67/400.00	8.3/8.8	qPCR
7	42	M	Subarachnoid haemorrhage	173.65/423.00	8.5/9.1	qPCR
8	19	M	Suicide	114.11/389.00	-	NGS
9	21	M	Suicide	35.3/59.66	-	NGS
10	54	M	Intracranial haemorrhage	45.35/91.77	-	NGS

- data not available but total RNA isolated from samples 8-10 passed their quality for NGS experiments

Table S2. Summary of primary antibodies.

Protein	Company	Catalogue #	Source	Dilution
Cx43	Millipore	MAB3068	Mono - Ms	1:50
HCN4	Alomone	APC-052	Poly - Rbt	1:50
Caveolin3	Transduction	310421	Poly-Ms	1:50

Table S3. Significantly up- or down- regulated miRs in the SN vs. RA. Mean relative miR expression and SEM in SN and RA, fold change and log fold change, and P values shown.

miR	SN mean	SN SEM	RA mean	RA SEM	Fold change	Log fold change	P value
hsa-miR-1-3p	6.00E-02	3.00E-02	2.00E-01	8.00E-02	-1.40E-01	-5.00E-01	3.00E-02
hsa-miR-10a-5p	1.00E-04	2.00E-05	3.00E-05	1.00E-05	3.50E-05	3.60E-01	5.00E-02
hsa-miR-10b-5p	5.00E-02	2.00E-03	1.00E-02	1.00E-03	4.00E-02	8.90E-01	1.00E-03
hsa-miR-10b-3p	1.00E-02	1.00E-02	2.00E-03	2.00E-03	5.34E-03	5.70E-01	1.00E-02
hsa-miR-126-3p	3.41E+00	8.90E-01	7.65E+00	1.31E+00	-4.24E+00	-3.50E-01	4.00E-02
hsa-miR-130b-3p	2.00E-03	1.00E-03	1.00E-02	1.00E-03	-3.00E-03	-4.00E-01	5.00E-02
hsa-miR-130b-5p	3.00E-03	4.00E-04	1.00E-02	1.00E-03	-3.00E-03	-3.20E-01	2.00E-02
hsa-miR-133a-3p	9.25E+00	1.77E+00	5.05E+01	1.13E+01	-4.12E+01	-7.40E-01	1.00E-03
hsa-miR-133b	3.00E-02	8.00E-03	1.62E-01	6.20E-02	-1.30E-01	-7.10E-01	5.36E-02
hsa-miR-139-5p	1.70E-01	3.00E-02	4.40E-01	6.00E-02	-2.70E-01	-4.10E-01	9.00E-03
hsa-miR-148b-3p	3.00E-03	1.00E-03	2.00E-02	1.00E-02	-2.00E-02	-8.90E-01	4.00E-02
hsa-miR-153-3p	2.00E-05	1.00E-05	4.00E-06	3.00E-06	1.00E-05	5.90E-01	5.00E-02
hsa-miR-155-5p	2.00E-02	1.00E-02	4.00E-02	6.00E-03	-2.00E-02	-3.10E-01	5.00E-02
hsa-miR-187-3p	3.00E-03	1.00E-03	4.00E-02	1.00E-02	-4.00E-02	-1.09E+00	1.00E-03
hsa-miR-193b-3p	2.00E-03	4.00E-04	1.00E-03	2.00E-04	1.00E-03	3.40E-01	2.00E-02
hsa-miR-198	1.00E-03	3.00E-04	4.00E-04	3.00E-04	3.00E-04	2.70E-01	4.00E-02
hsa-miR-204-5p	8.10E-01	2.10E-01	1.60E-01	3.00E-02	6.50E-01	7.00E-01	2.00E-03
hsa-miR-210-3p	4.00E-02	1.00E-02	1.30E-01	3.00E-02	-9.00E-02	-5.10E-01	1.00E-02
hsa-miR-215-5p	3.00E-03	1.00E-03	2.00E-04	1.00E-04	3.00E-03	1.23E+00	1.00E-03
hsa-miR-218-5p	2.00E-04	4.00E-05	1.00E-03	2.00E-04	-4.00E-04	-4.40E-01	5.00E-02
hsa-miR-22-3p	1.00E-02	3.00E-03	2.00E-02	2.00E-03	-1.00E-02	-3.70E-01	5.00E-03
hsa-miR-27b-3p	1.00E-02	1.00E-03	1.00E-02	1.00E-03	-6.00E-03	-3.30E-01	6.00E-03
hsa-miR-29b-3p	1.00E-03	3.00E-04	2.00E-03	2.00E-04	-8.00E-04	-3.10E-01	3.00E-02
hsa-miR-30a-3p	2.90E-01	6.00E-02	5.20E-01	7.00E-02	-2.30E-01	-2.60E-01	3.00E-02
hsa-miR-30a-5p	2.40E-01	6.00E-02	5.40E-01	7.00E-02	-3.00E-01	-3.50E-01	2.00E-02
hsa-miR-30b-5p	9.10E-01	2.30E-01	2.35E+00	5.30E-01	-1.43E+00	-4.10E-01	3.00E-02
hsa-miR-30c-5p	1.69E+00	4.30E-01	4.76E+00	1.14E+00	-3.07E+00	-4.50E-01	4.00E-02
hsa-miR-30d-5p	8.00E-02	2.00E-02	1.90E-01	3.00E-02	-1.10E-01	-3.80E-01	1.00E-02
hsa-miR-30e-3p	2.60E-01	6.00E-02	5.20E-01	7.00E-02	-2.60E-01	-3.00E-01	2.00E-02
hsa-miR-342-5p	4.00E-04	2.00E-04	2.00E-03	1.00E-03	-1.00E-03	-5.80E-01	2.00E-02
hsa-miR-363-5p	3.00E-07	1.00E-07	1.00E-05	7.00E-06	-1.00E-05	-1.56E+00	4.00E-02
hsa-miR-371-3p	3.00E-05	1.00E-05	2.00E-04	8.00E-05	-1.00E-04	-7.60E-01	4.00E-02
hsa-miR-372-3p	1.00E-03	3.00E-04	1.00E-02	3.00E-03	-5.00E-03	-9.60E-01	2.00E-02
hsa-miR-373-3p	3.00E-05	2.00E-05	1.00E-04	2.00E-05	-1.00E-04	-4.60E-01	3.00E-03
hsa-miR-377-3p	6.90E-01	1.00E-05	1.47E+00	4.00E-06	-7.80E-01	-3.30E-01	4.00E-02
hsa-miR-377-5p	3.00E-05	5.20E-01	5.00E-06	5.40E-01	2.00E-05	7.60E-01	4.00E-02
hsa-miR-378a-3p	3.00E-02	1.00E-02	6.00E-02	1.00E-02	-3.00E-02	-3.40E-01	2.00E-02
hsa-miR-378a-5p	4.00E-04	1.00E-04	1.00E-03	1.00E-04	-3.00E-04	-2.60E-01	5.00E-02
hsa-miR-422a	3.00E-03	1.00E-03	1.00E-02	2.00E-03	-5.00E-03	-4.40E-01	2.00E-02
hsa-miR-424-5p	1.00E-03	3.00E-04	3.00E-03	1.00E-03	-2.00E-03	-3.90E-01	3.00E-02
hsa-miR-429	2.00E-04	2.00E-04	2.00E-03	1.00E-03	-2.00E-03	-9.10E-01	4.00E-02

miR	SN mean	SN SEM	RA mean	RA SEM	Fold change	Log fold change	P value
hsa-miR-450b-5p	1.00E-04	1.00E-04	3.00E-04	1.00E-04	-1.00E-04	-3.60E-01	4.00E-02
hsa-miR-483-3p	1.40E-02	4.00E-03	5.00E-02	1.00E-02	-3.00E-02	-5.10E-01	4.00E-03
hsa-miR-486	6.00E-03	2.00E-03	1.00E-02	2.00E-03	-7.00E-03	-3.30E-01	5.00E-02
hsa-miR-486-3p	3.00E-04	1.00E-04	1.00E-03	3.00E-04	-8.00E-04	-5.70E-01	1.00E-02
hsa-miR-490-3p	9.00E-04	2.00E-04	1.00E-02	1.00E-03	-4.00E-03	-7.60E-01	4.00E-02
hsa-miR-512-5p	1.83E+01	1.16E+01	1.00E-05	9.00E-06	1.83E+01	6.10E+00	3.00E-02
hsa-miR-515-3p	3.00E-07	1.00E-07	3.00E-06	2.00E-06	-3.00E-06	-9.70E-01	4.00E-02
hsa-miR-520d-3p	9.00E-05	4.00E-05	2.00E-04	3.00E-05	-8.00E-05	-2.70E-01	5.00E-02
hsa-miR-520g-3p	6.00E-06	1.00E-05	0.00E+00	2.00E-05	-3.00E-05	-8.40E-01	5.00E-02
hsa-miR-524-3p	5.00E-06	2.00E-06	4.00E-04	2.00E-04	-4.00E-04	-1.95E+00	4.00E-02
hsa-miR-548b-5p	1.00E-04	1.00E-04	1.00E-04	6.00E-05	6.00E-05	2.80E-01	4.00E-02
hsa-miR-548k	2.00E-06	1.00E-06	0.00E+00	8.00E-08	2.00E-06	7.20E-01	5.00E-02
hsa-miR-571	8.00E-05	2.00E-05	4.00E-04	2.00E-04	-3.00E-04	-6.60E-01	3.00E-02
hsa-miR-584-5p	6.00E-04	1.00E-04	1.00E-03	1.00E-04	-5.00E-04	-2.70E-01	4.00E-02
hsa-miR-616-5p	2.00E-04	4.00E-05	3.00E-04	4.00E-05	-1.00E-04	-2.60E-01	4.00E-02
hsa-miR-628-3p	3.00E-03	1.00E-03	5.00E-03	1.00E-03	-2.00E-03	-2.70E-01	4.00E-02
hsa-miR-642a-5p	3.00E-03	1.00E-03	3.00E-02	1.00E-02	-2.00E-02	-1.00E+00	4.00E-04
hsa-miR-651-5p	2.00E-05	1.00E-05	4.00E-05	9.00E-06	-2.00E-05	-3.70E-01	4.00E-02
hsa-miR-654-5p	1.00E-04	1.00E-04	4.00E-07	6.00E-08	1.00E-04	2.48E+00	3.00E-02
hsa-miR-668-3p	5.00E-05	2.00E-05	4.00E-07	8.00E-08	5.00E-05	2.11E+00	3.00E-02
hsa-miR-885-3p	1.00E-03	1.00E-03	4.00E-07	7.00E-08	1.00E-03	3.45E+00	2.00E-02
hsa-miR-938	2.00E-06	1.00E-06	1.00E-05	1.00E-06	-1.00E-05	-6.60E-01	3.00E-03
hsa-miR-1225-3p	3.00E-02	1.00E-02	1.00E-02	1.00E-02	1.00E-02	3.10E-01	3.00E-02
hsa-miR-1233-3p	5.00E-04	5.00E-04	5.38E+00	4.35E+00	-5.38E+00	-4.05E+00	3.00E-02
hsa-miR-1244-3p	3.00E-04	1.00E-04	1.00E-04	4.00E-05	2.09E-04	4.50E-01	1.00E-02

miRs with significant higher expression in SN highlighted in bold.