SUPPLEMENTARY INFORMATION

Supplemental Figure Legend

Fig. S1 miR-200c expression is induced by oxidative stress in human fibroblasts

Two independent preparations of normal foreskin fibroblasts were treated with 25 μM and 200 μM H_2O_2 for 1 hr and 16 hrs. There was no significant effect of upon 25 μM H_2O_2 on miR-200c, in contrast 200 μM H_2O_2 enhanced miR-200c both 1hr and16 hrs after treatment (n=3; **P* <0.001; $^{\#}P$<0.01).

Fig. S2 Oxidative stress down-modulates ZEB1

A) HUVEC were either preincubated with 10 mM NAC or sham-treated for 30 min prior to exposure to 0.25 mM BCNU for 2 hrs. Expression levels of ZEB1 protein were evaluated by densitometric analysis and normalized by α-tubulin protein levels (n=3 ; **P*<0.001; $^{\#}P$<0.05).

B) HUVEC were treated with 200 μM H_2O_2 for 2–24 hr and ZEB2 mRNA was quantified by qPCR. ZEB2 expression exhibited a statistically significant decrease from control only at the 2 hr time point (n=4 at each time point; **P* <0.001).

C) HUVEC were infected with a lentiviral vector encoding either miR-200c or miR-scramble. After 24 hrs cells were selected with puromycin and ZEB2 mRNAs was quantified by qPCR; miR-200c over-expression had no significant effect on ZEB2 mRNA (n=3; **P* <0.001).

Fig. S3 Functional effects of ZEB1 knockdown in EC

A) Left panel: HUVEC were infected either with 3 different lentiviruses carrying ZEB1-specific shRNA (ZEB1-a, ZEB1-b, ZEB1-c) or with the control virus. After 24 hrs cells were selected with puromycin and plated. ZEB1 knockdown inhibited cell proliferation compared to control (n=3; **P* <0.001; $^{\#}P$<0.05). Right panel: HUVEC were transduced with shRNA-ZEB1 or with control virus. After selection cells were plated and 40 hrs later were pulse labelled with BrdU for 30 minutes before

harvesting, fixed and then stained with propidium iodide and an α– BrdU antibody. ZEB1 knockdown was associated with a decrease in % of BrdU-positive cells (n= 3; **P*<0.001).

B) HUVEC were transduced with shRNA-(ZEB1-a, ZEB1-b, ZEB1-c) or with control virus. After selection cells were plated and 40 hrs later apoptosis was measured. Left panel: ZEB1 depletion induced apoptosis as determined by fragmentation of cellular DNA (n=3; **P*<0.001; $^{\#}P$<0.01). Right panel: ZEB1 depletion increased the number of cells in sub-G1 phase of the cell cycle as determined by the % of cells displaying subdiploid DNA content by flow cytometry (n=3; **P*<0.001; $^{\#}P$<0.01).

C) Left panel: HUVEC transduced with shRNA-(ZEB1-a, ZEB1-b, ZEB1-c) or with control virus were seeded and after 8 hrs were fixed and stained for SA-β-gal. ZEB1 knockdown enhanced the % of SA-β-gal-positive cells compared to control (n=3; **P*<0.001; $^{\#}P$<0.01). Right panel: Representative Western blot demonstrating a 70% knockdown of ZEB1 expression in HUVEC infected with lentiviruses encoding a ZEB1-specific shRNA sequences (ZEB1-a, ZEB1-b, ZEB1-c) compared to control virus-infected cells. HUVEC transduced with ZEB1-specific shRNAs exhibited an up-regulation of p21 compared to control. The same protein extracts were run on a 6% SDS polyacrylamide gel to detect ZEB1 and on a 12% to detect p21. This experiment was performed 3 times with similar results. Tub, α-tubulin.

Fig. S4 Mechanism of induction of miR-200c by H_2O_2

A) C2C12 myoblasts were transfected either with miR-200c promoter luciferase plasmid (wt), or with miR-200c promoter mutated in both ZEB1 binding sites luciferase plasmid (Z1/Z2 mutant). After 36 hrs cells were treated with 200 μM H_2O_2 for additional 24 hrs. Luciferase reporter assay showed that wt-promoter was induced by H_2O_2 and that the Z1/Z2 mutant was significantly induced only in basal condition and not after H_2O_2 treatment (n=3 ; **P*<0.001; $^{\#}P$<0.05; non significant = ns) .

B) C2C12 myoblasts were transfected either with miR-200c promoter luciferase plasmid (wt), or with miR-200c promoter mutated in both ZEB1 binding sites luciferase plasmid (Z1/Z2 mutant). After 36 hrs cells were treated with 200 μM H_2O_2 for additional 24 hrs. Thereafter, miR-200c expression levels in the adopted experimental conditions were quantified by qPCR (n=3; **P*<0.001).

C) HUVEC were infected either with the lentivirus carrying ZEB1-specific shRNA or with the control virus. After 24 hrs cells were selected with puromycin and plated for additional 16 hrs. Thereafter RNA were extracted and qPCR revealed that ZEB1 knockdown caused the induction of all miR-200 family members (n=3; $*P<0.001$; $^{\#}P<0.01$; $^{\S}P<0.05$).

Fig. S5 p53 knockdown and over-expression.

A) Representative Western blot demonstrating a 70% knockdown of p53 expression in HUVEC infected with a retrovirus encoding a p53-specific shRNA sequence (shRNA-p53) compared to control virus infected cells (shRNA-ctrl).

B) Representative Western blot demonstrating p53 overexpression in HUVEC infected with an adenovirus encoding p53 (Ad-p53) compared to control virus infected cells (Ad-null).

Fig. S6. Proposed model of miR-200c up-regulation upon H_2O_2 treatment in EC.

H_2O_2 induces miR-200c up-regulation by different mechanisms. One mechanism involves pRb de-phosphorylation. H_2O_2 causes pRb dephosphorylation by a PP2A dependent pathway and by the increase of p53 and p21, which inhibits the cyclin-dependent kinases (CDKs). pRb dephosphorylation, in turn, inhibits E2F transcription factor activity down-modulating ZEB1 mRNA leading to a decrease of ZEB1 protein, which provokes the up-regulation p21 transcription. Moreover, ZEB1 down-modulation induces miR-200c up-regulation because of the presence of ZEB1-inhibitory binding sites in miR-200c promoter. miR-200c up-regulation can be also obtained by a p53-dependent mechanism. The over-expression of p53, in fact, strongly induces miR-200c. The final effect of miR-200c increase is the establishment of growth arrest and senescence, induced by pRb dephosphorylation and ZEB1 down-modulation, and also the induction of apoptosis caused by the decrease of ZEB1.

FIGURE S1

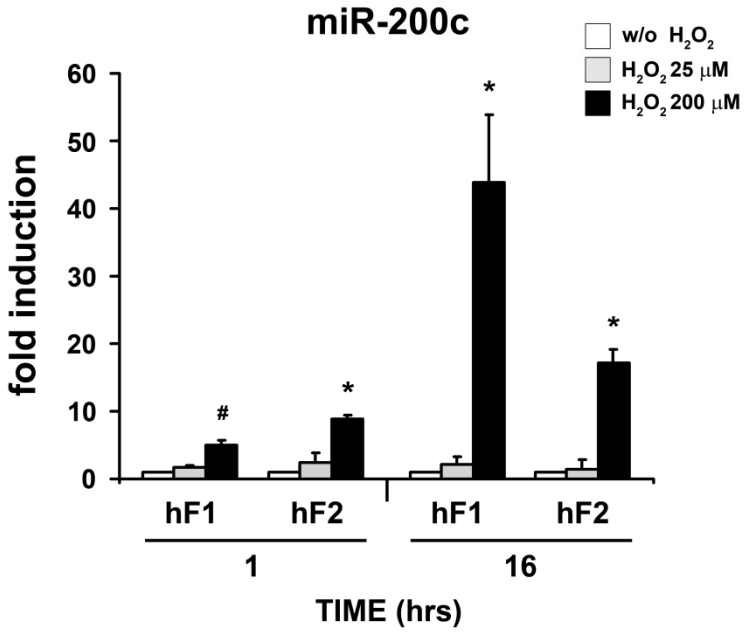

miR-200c
w/o H_2O_2
H_2O_2 25 μM
H_2O_2 200 μM
fold induction
60
50
40
30
20
10
0
#
*
*
*
hF1
hF2
hF1
hF2
1
16
TIME (hrs)

FIGURE S2

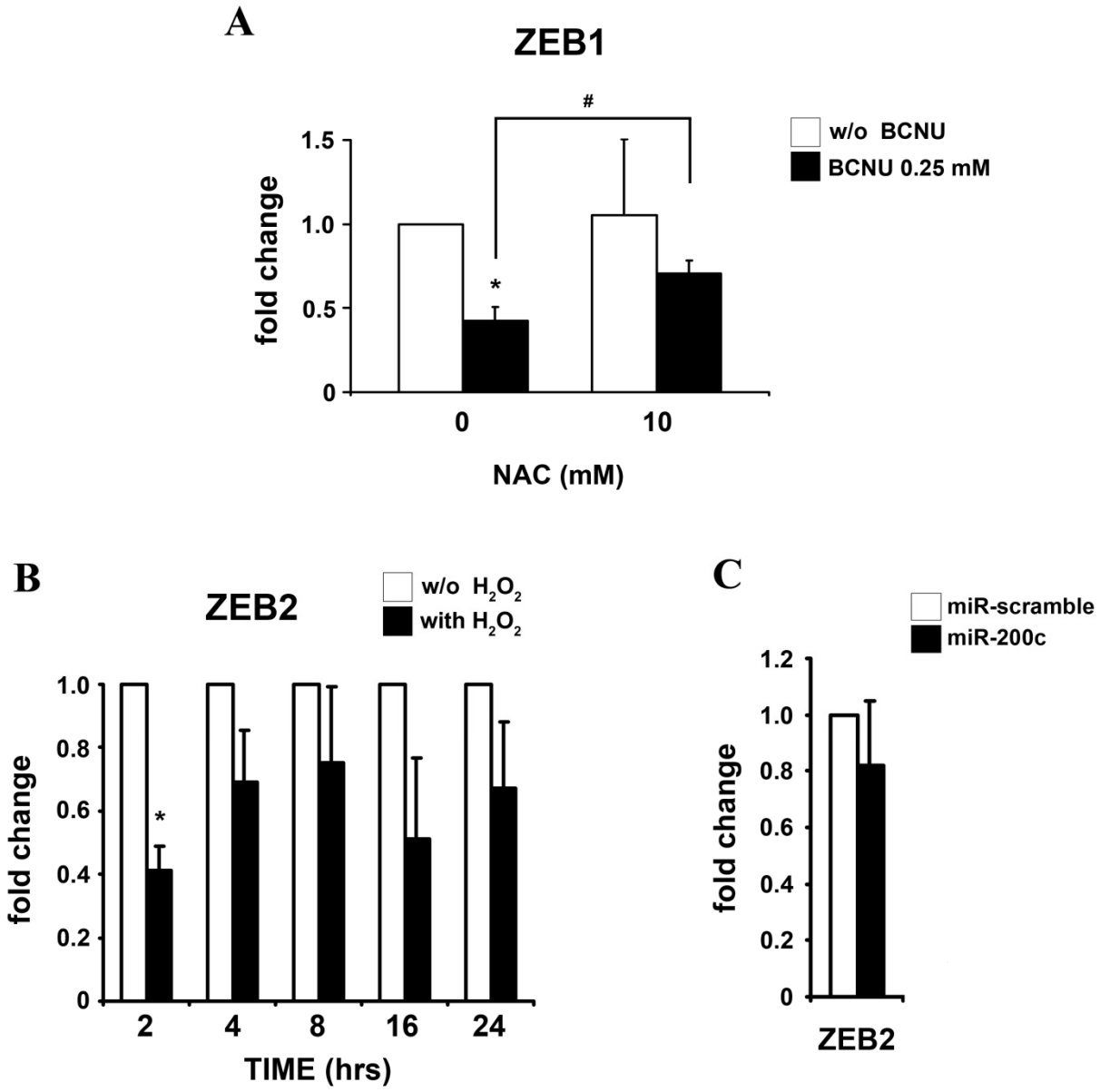

A
ZEB1
#
w/o BCNU
BCNU 0.25 mM
fold change
1.5
1.0
0.5
0
*
0
10
NAC (mM)
B
ZEB2
w/o H_2O_2
with H_2O_2
fold change
1.0
0.8
0.6
0.4
0.2
0
*
2
4
8
16
24
TIME (hrs)
C
miR-scramble
miR-200c
fold change
1.2
1.0
0.8
0.6
0.4
0.2
0
ZEB2

FIGURE S3

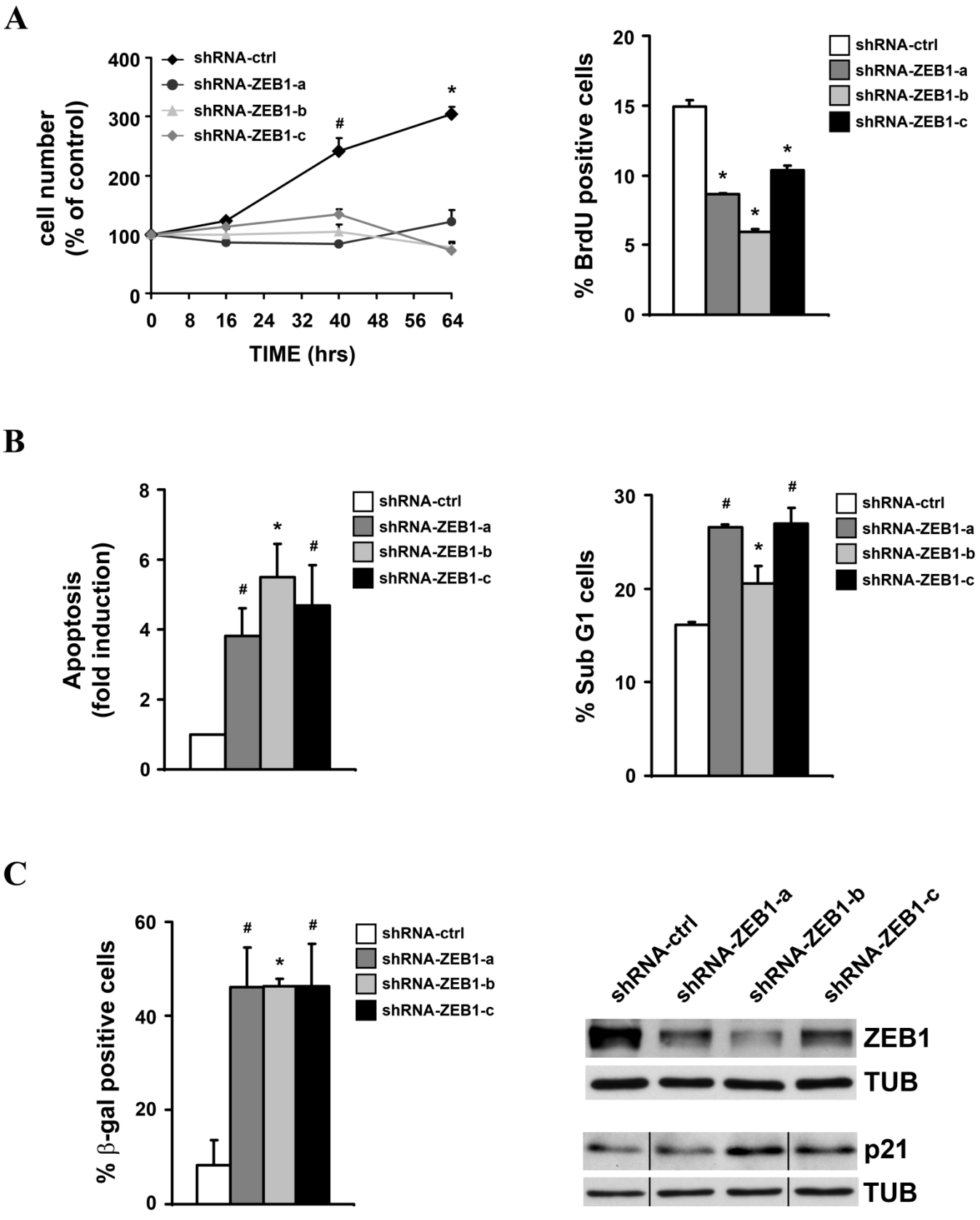

A
cell number (% of control)
400
300
200
100
0
0 8 16 24 32 40 48 56 64
TIME (hrs)
shRNA-ctrl
shRNA-ZEB1-a
shRNA-ZEB1-b
shRNA-ZEB1-c
#
*
% BrdU positive cells
20
15
10
5
0
B
Apoptosis (fold induction)
8
6
4
2
0
% Sub G1 cells
30
20
10
0
C
% β-gal positive cells
60
40
20
0
shRNA-ctrl
shRNA-ZEB1-a
shRNA-ZEB1-b
shRNA-ZEB1-c
ZEB1
TUB
p21
TUB

FIGURE S4

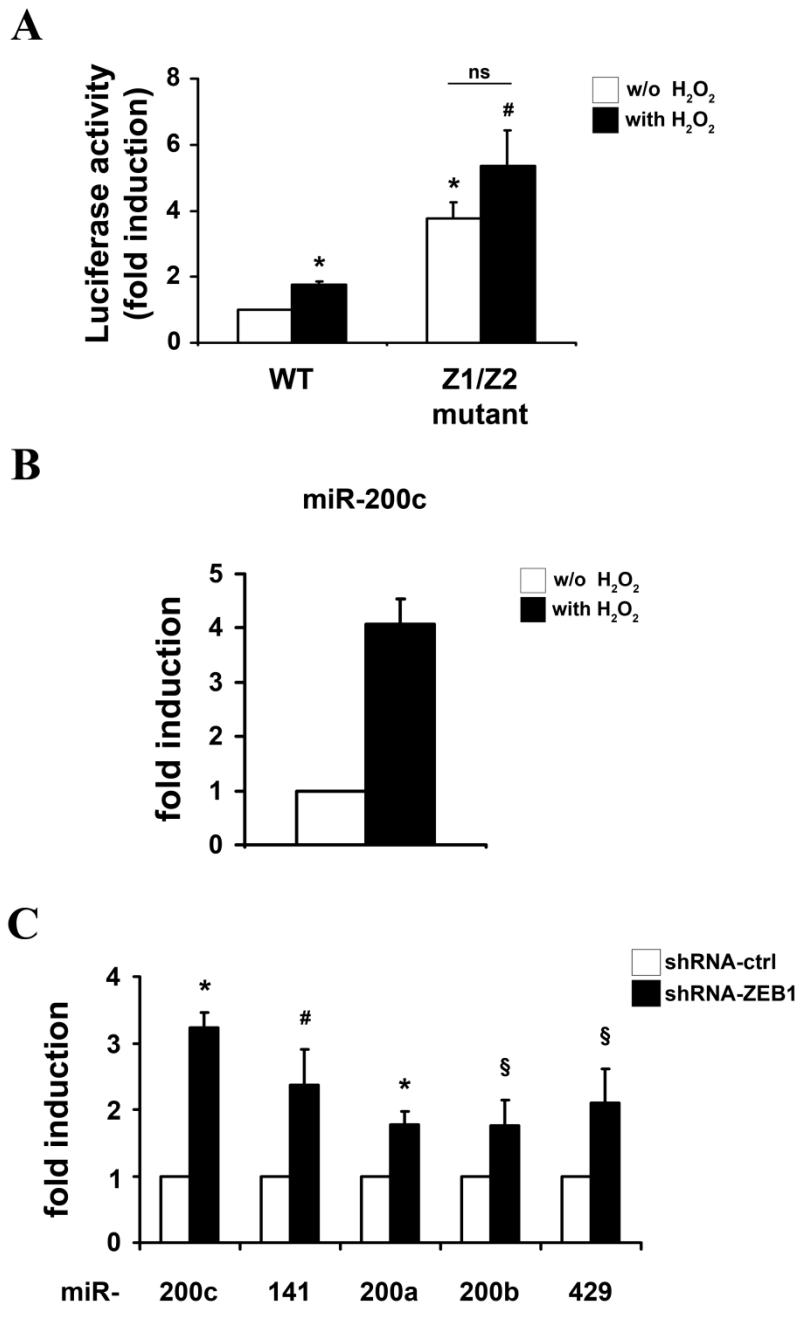

A
Luciferase activity (fold induction)
8
6
4
2
0
ns
*
#
*
w/o H_2O_2
with H_2O_2
WT
Z1/Z2 mutant
B
miR-200c
fold induction
5
4
3
2
1
0
w/o H_2O_2
with H_2O_2
C
fold induction
4
3
2
1
0
*
#
*
§
§
shRNA-ctrl
shRNA-ZEB1
miR-
200c
141
200a
200b
429

FIGURE S5

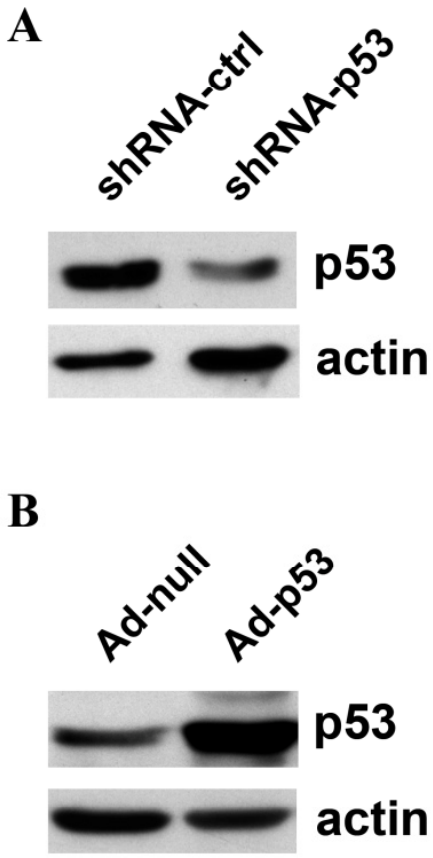
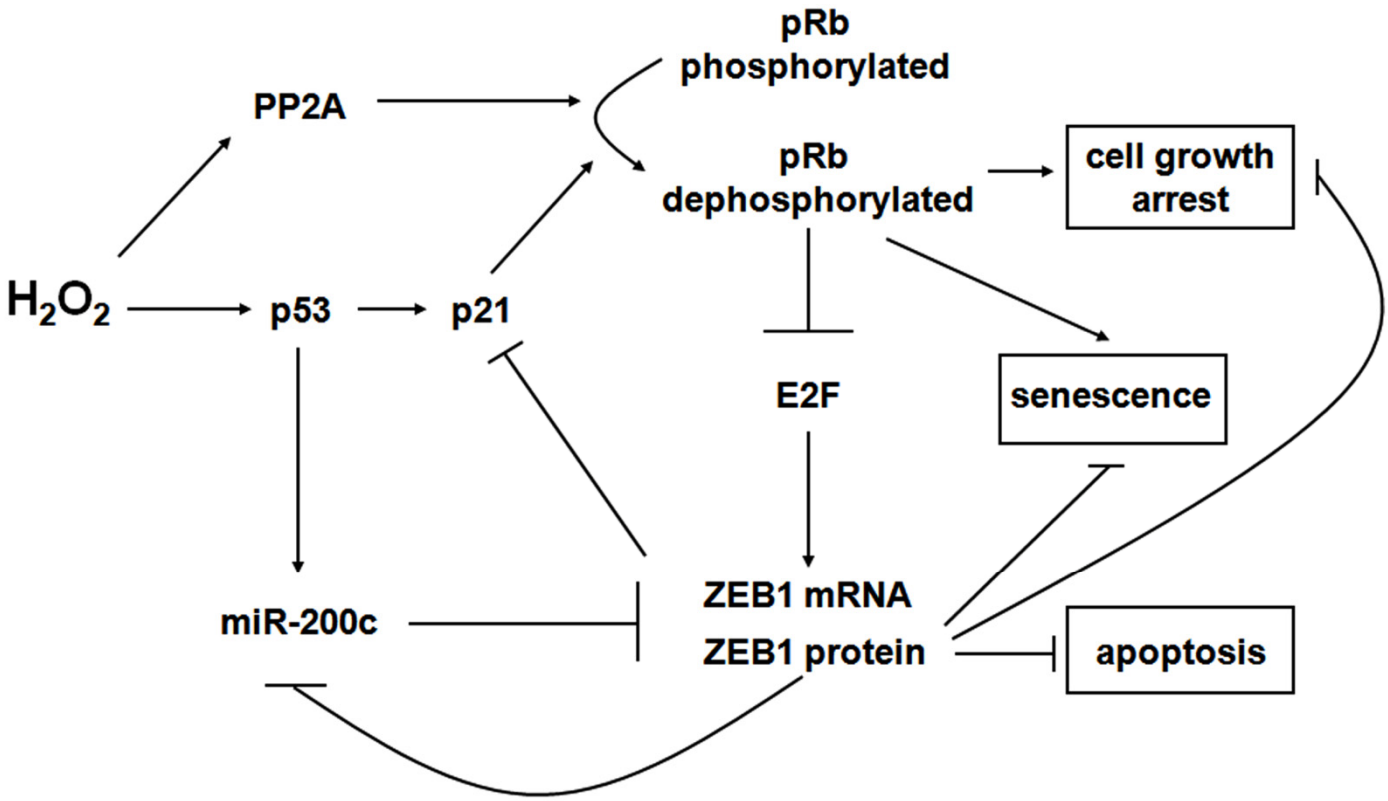


FIGURE S6


pRb
phosphorylated
PP2A
pRb
dephosphorylated
cell growth
arrest
H2O2
p53
p21
E2F
senescence
ZEB1 mRNA
miR-200c
ZEB1 protein
apoptosis

SUPPLEMENTARY TABLE 1. microRNA expression profiling upon oxidative stress

Experiment Design	
The goal of the experiment:	miR-200c is Up-regulated by Oxidative Stress and Induces Endothelial Cell Apoptosis and Senescence
Keywords:	microRNA; Oxidative stress; endothelium; Real Time PCR; comparative Ct method
Experimental design:	Human Umbelical Vein Endothelial Cells (HUVEC) were exposed to H_2O_2 200 μM for 0, 8 and 24 hours and a selection of 250 miRNAs was measured using a real-time PCR assay designed to quantify only mature miRNAs.
Primers description:	The basis of TaqMan MicroRNA Assays is a target-specific stem-loop reverse-transcriptase primer. The short length of mature miRNAs (~22 nt) prohibits conventional design of a randomprimed retrotranscription step followed by a specific Real-Time assay. The stem-loop accomplishes two goals: 1) specificity for only the mature miRNA target, and 2) formation of an RT primer/mature miRNA-chimera, extending the 5' end of the miRNA. The resulting longer RT amplicon presents a template amenable to Real-Time TaqMan assay. TaqMan miRNA assays can between highly homologous targets, with only a single nucleotide mismatch.

Samples used, extract preparation and amplification	
The origin of each biological sample and its characteristics:	HUVEC - Umbilical Vein Endothelial Cells. The analyzed population represents a pool of 100 independent donors. Cells were purchased from Clonetics.
Manipulation of biological samples and protocols used:	HUVEC were grown in EGM-2 (Bio-Whittaker) containing 2% FBS, at 37°C in a humidified atmosphere with 5% CO2/95% air. H_2O_2 (30% w/w solution, Sigma) was administered to the cells as a solution in phosphate-buffered saline.
Technical protocols for preparing extract:	Total RNA was extracted using TRIzol (Invitrogen). RNA concentrations were determined with a NanoDrop Spectrophotometer (NanoDrop Technologies) and 1 ng per sample was used for the assays.
Technical protocols for Real-Time PCR:	3 ng per sample were retrotranscribed using The TaqMan MicroRNA Reverse Transcription Kit and specific primers for each miRNA (see figure 1 for retrotranscription program). miRNA levels were analysed using the TaqMan Real Time PCR method in an Applied Biosystems 7000 Thermocycler (9600 emulation mode), using 1.6 mL of each retrotranscribed sample, the TaqMan Universal PCR Master Mix No AmpErase UNG and specific primers for each miRNA (see figure 2 for PCR program). All reagents were purchrased from Applied Biosystems.

Step Type	Time (min)	Temperature (°C)
HOLD	30	16
HOLD	30	42
HOLD	5	85
HOLD	∞	4

Figure 1: retrotranscription program

Step	AmpliTaq Gold® Enzyme Activation	PCR	
	HOLD	CYCLE (40 cycles)	
		Denature	Anneal/ Extend
Time	10 min	15 sec	60 sec
Temp (°C)	95	95	60

Figure 2: Real-Time PCR program

Measurement data and specifications	
Software used:	Real Time PCR are quantified with ABI Prism 7000 SDS (Applied Biosystems).
Raw datas and normalization:	- Ct: Raw data are expressed as Cycle Threshold (Ct). The threshold line is setted in the exponential phase of the amplification. The Ct indicates the cycle at which the sample reaches this level. - ΔCt: miRNAs were assayed in a 96-well format and samples were normalized to the median Ct value of each assay. - ΔΔCt: this value indicates the ΔCT variation *vs* the control of each experimental point. Fold changes were calculated using the comparative Ct method ($2^{-\Delta\Delta Ct}$).

miRNA modulation (ΔΔCt)

miRNA	CONTROL					H_2O_2 200μM - 8hrs					H_2O_2 200μM - 24hrs				
	A	B	C	ave	*fold change*	A	B	C	ave	*fold change*	A	B	C	ave	*fold change*
1	0.7	-0.5	-0.2	**0.0**	***1.0***	3.6	-0.4	2.6	**1.9**	***0.3***	6.4	1.8	5.7	**4.6**	***0.0***
7	0.9	-1.0	0.1	**0.0**	***1.0***	0.8	-1.5	0.2	**-0.2**	***1.1***	1.0	-1.1	0.3	**0.1**	***1.0***
9	-0.3	-0.6	0.9	**0.0**	***1.0***	-0.2	-0.3	-1.5	**-0.7**	***1.6***	-0.8	-0.3	0.7	**-0.1**	***1.1***
10a	0.6	-0.2	-0.4	**0.0**	***1.0***	0.1	-0.6	-0.5	**-0.3**	***1.3***	-1.1	-0.7	-0.8	**-0.9**	***1.8***
10b	0.9	-0.7	-0.2	**0.0**	***1.0***	-1.3	-1.0	-0.6	**-1.0**	***2.0***	-1.4	-0.1	-1.4	**-1.0**	***2.0***
15a	-0.5	1.3	-0.8	**0.0**	***1.0***	2.3	0.6	-0.3	**0.9**	***0.5***	1.1	1.0	1.0	**1.0**	***0.5***
15b	-0.6	-0.4	1.0	**0.0**	***1.0***	0.8	0.3	-0.1	**0.3**	***0.8***	-0.1	0.9	-1.1	**-0.1**	***1.1***
16	0.1	1.0	-1.1	**0.0**	***1.0***	1.5	-0.2	-1.3	**0.0**	***1.0***	0.6	1.1	-2.6	**-0.3**	***1.2***
17-3p	-1.1	0.9	0.2	**0.0**	***1.0***	-0.2	0.1	0.3	**0.1**	***1.0***	-1.0	0.6	0.3	**0.0**	***1.0***
17-5p	-0.5	0.5		**0.0**	***1.0***	-0.3	0.5	0.2	**0.1**	***0.9***	-0.1	1.2	-0.3	**0.3**	***0.8***
18a	-0.4	0.6	-0.2	**0.0**	***1.0***	0.1	-0.4	0.0	**-0.1**	***1.1***	-0.3	0.4	-0.1	**0.0**	***1.0***
19a	-0.2	0.4	-0.3	**0.0**	***1.0***	1.1	1.0	0.3	**0.8**	***0.6***	1.3	1.5	1.0	**1.3**	***0.4***
19b	-0.1	0.2	-0.1	**0.0**	***1.0***	0.3	0.2	-0.4	**0.0**	***1.0***	-0.8	0.3	-0.3	**-0.3**	***1.2***
20a	-0.7	0.3	0.4	**0.0**	***1.0***	0.6	-0.1	-0.5	**0.0**	***1.0***	-0.6	0.7	-0.4	**-0.1**	***1.1***
20b	1.2	-0.7	-0.5	**0.0**	***1.0***	1.7	0.3	0.4	**0.8**	***0.6***	-0.3	1.0	1.2	**0.6**	***0.6***
21	0.5	0.4	-0.9	**0.0**	***1.0***	-0.4	-0.3	-0.3	**-0.3**	***1.3***	-0.5	0.1	-0.2	**-0.2**	***1.1***
22	0.1	0.3	-0.4	**0.0**	***1.0***	-0.3	0.5	0.3	**0.2**	***0.9***	-0.6	-0.2	0.9	**0.0**	***1.0***
23a	-1.3	0.2	1.1	**0.0**	***1.0***	-0.7	-0.4	0.1	**-0.3**	***1.3***	-0.2	-0.4	0.8	**0.1**	***1.0***
23b	-0.9	-0.3	1.3	**0.0**	***1.0***	0.5	0.0	0.7	**0.4**	***0.8***	-0.5	0.3	0.9	**0.2**	***0.9***
24	0.0	0.5	-0.4	**0.0**	***1.0***	0.6	-0.2	-0.3	**0.0**	***1.0***	-0.6	-0.1	-0.1	**-0.3**	***1.2***
25	-0.1	0.2	-0.1	**0.0**	***1.0***	0.5	0.7	0.6	**0.6**	***0.7***	-0.4	0.9	-0.4	**0.0**	***1.0***
26a	0.9	-0.9	0.0	**0.0**	***1.0***	-0.5	0.0	-0.8	**-0.4**	***1.4***	-0.7	-0.2	-1.7	**-0.9**	***1.8***
26b	-0.5	0.6	-0.1	**0.0**	***1.0***	-0.5	-0.5	0.0	**-0.3**	***1.3***	-0.4	0.5	-0.3	**-0.1**	***1.0***
27a	-1.2	1.0	0.2	**0.0**	***1.0***	1.1	0.4	0.0	**0.5**	***0.7***	0.0	0.8	0.2	**0.3**	***0.8***
27b	-0.2	0.2	0.0	**0.0**	***1.0***	0.8	-0.4	0.0	**0.1**	***0.9***	0.3	0.4	-0.3	**0.1**	***0.9***
28	-0.4	0.0	0.4	**0.0**	***1.0***	-0.1	0.0	-0.1	**-0.1**	***1.0***	0.1	-0.2	0.0	**0.0**	***1.0***
29a	0.8	-0.2	-0.6	**0.0**	***1.0***	-0.5	0.0	-0.1	**-0.2**	***1.1***	-0.8	-0.5	1.1	**-0.1**	***1.0***
29b	-0.1	0.9	-0.8	**0.0**	***1.0***	-1.5	0.4	0.6	**-0.2**	***1.1***	-3.3	0.3	1.1	**-0.6**	***1.6***
29c	-0.6	-0.1	0.8	**0.0**	***1.0***	-0.7	1.0	1.5	**0.6**	***0.7***	-1.2	0.9	1.6	**0.4**	***0.7***
30a-3p	-0.1	0.3	-0.2	**0.0**	***1.0***	-0.8	0.2	-0.2	**-0.3**	***1.2***	0.1	0.0	-0.2	**0.0**	***1.0***
30a-5p	-0.6	0.0	0.7	**0.0**	***1.0***	0.3	0.2	1.0	**0.5**	***0.7***	-0.9	0.1	0.5	**-0.1**	***1.1***
30b	-0.1	0.3	-0.2	**0.0**	***1.0***	0.2	-0.7	-0.4	**-0.3**	***1.2***	-1.3	0.1	-1.4	**-0.9**	***1.8***
30c	-0.6	-0.4	1.0	**0.0**	***1.0***	0.4	0.0	-0.1	**0.1**	***0.9***	0.0	0.3	-0.6	**-0.1**	***1.1***
30d	0.3	-1.1	0.8	**0.0**	***1.0***	-0.7	-1.1	0.7	**-0.4**	***1.3***	0.1	-0.5	0.4	**0.0**	***1.0***
30e-3p	0.7	-0.4	-0.2	**0.0**	***1.0***	-0.5	0.2	-0.1	**-0.1**	***1.1***	-0.2	0.0	0.2	**0.0**	***1.0***
30e-5p	-1.7	-0.2	1.9	**0.0**	***1.0***	0.5	-0.4	1.7	**0.6**	***0.7***	0.0	0.9	1.2	**0.7**	***0.6***
31	0.2	-0.4	0.2	**0.0**	***1.0***	-0.1	-1.3	-0.2	**-0.5**	***1.4***	-0.5	-0.8	0.3	**-0.3**	***1.3***
32	-0.8	0.4	0.5	**0.0**	***1.0***	0.8	0.9	-0.5	**0.4**	***0.8***	-1.1	1.3	0.1	**0.1**	***0.9***
33	1.0	0.3	-1.4	**0.0**	***1.0***	-0.4	-0.4	1.1	**0.1**	***0.9***	-2.1	0.2	1.3	**-0.2**	***1.1***
34a	0.5	0.2	-0.7	**0.0**	***1.0***	-0.6	-0.2	0.4	**-0.1**	***1.1***	-0.9	0.1	0.4	**-0.1**	***1.1***
34b	0.4	-0.3	-0.1	**0.0**	***1.0***	3.6	1.4	1.6	**2.2**	***0.2***	1.5	-0.7	1.4	**0.7**	***0.6***
34c	-0.7	-0.3	1.0	**0.0**	***1.0***	-0.5	-0.7	-0.3	**-0.5**	***1.4***	-0.8	-1.4	4.1	**0.6**	***0.6***
92	0.8	-0.1	-0.6	**0.0**	***1.0***	0.1	-0.6	0.0	**-0.2**	***1.1***	-0.1	-0.5	-0.9	**-0.5**	***1.4***
93	0.2	0.2	-0.3	**0.0**	***1.0***	0.1	-0.2	-0.5	**-0.2**	***1.1***	-0.2	-0.2	-1.7	**-0.7**	***1.6***
95	0.7	-1.7	1.0	**0.0**	***1.0***	2.9	-1.2	2.0	**1.2**	***0.4***	2.0	0.9	1.8	**1.6**	***0.3***
96	0.9	-1.0	0.1	**0.0**	***1.0***	0.8	-3.4	-1.0	**-1.2**	***2.3***	1.0	-1.1	0.3	**0.1**	***1.0***
98	0.9	0.0	-0.9	**0.0**	***1.0***	0.5	0.2	-0.9	**-0.1**	***1.0***	-0.4	0.8	-0.1	**0.1**	***0.9***
99a	0.0	0.2	-0.2	**0.0**	***1.0***	-0.4	-0.4	0.3	**-0.2**	***1.1***	-0.5	-0.4	0.6	**-0.1**	***1.1***
99b	0.6	-0.9	0.4	**0.0**	***1.0***	0.6	-1.0	0.4	**0.0**	***1.0***	0.2	-1.1	0.4	**-0.2**	***1.1***
100	0.3	-0.2	0.0	**0.0**	***1.0***	0.0	0.0	-0.3	**-0.1**	***1.1***	0.1	-0.4	0.2	**0.0**	***1.0***
101	1.3	-0.6	-0.7	**0.0**	***1.0***	-1.7	0.4	0.3	**-0.3**	***1.3***	0.2	0.0	0.4	**0.2**	***0.9***
103	-0.3	-0.1	0.4	**0.0**	***1.0***	-0.2	-0.1	0.4	**0.0**	***1.0***	0.4	0.3	0.4	**0.4**	***0.8***
106a	-0.9	0.2	0.7	**0.0**	***1.0***	-0.4	0.1	0.1	**-0.1**	***1.0***	-0.1	0.8	0.8	**0.5**	***0.7***
106b	-0.2	0.4	-0.3	**0.0**	***1.0***	0.0	0.4	0.4	**0.3**	***0.8***	0.3	0.8	0.3	**0.5**	***0.7***
107	-1.0	0.1	0.9	**0.0**	***1.0***	0.6	-0.8	0.4	**0.1**	***1.0***	-0.5	0.5	-0.5	**-0.2**	***1.1***
122a	3.1	-2.7	-0.5	**0.0**	***1.0***	4.9	-1.6	4.3	**2.5**	***0.2***	5.1	3.0	4.4	**4.2**	***0.1***
124a	1.7	-1.9	0.2	**0.0**	***1.0***	-1.7	-1.8	2.4	**-0.4**	***1.3***	0.2	-2.2	2.5	**0.2**	***0.9***
125a	0.1	-0.1	0.0	**0.0**	***1.0***	0.4	-1.0	0.2	**-0.1**	***1.1***	1.0	-0.7	-0.1	**0.1**	***1.0***
125b	-0.2	-0.1	0.3	**0.0**	***1.0***	0.4	-0.8	1.1	**0.2**	***0.9***	-0.2	-0.4	1.5	**0.3**	***0.8***
126*	-0.6	0.2	0.4	**0.0**	***1.0***	0.3	0.3	-0.6	**0.0**	***1.0***	0.3	0.5	-0.5	**0.1**	***0.9***
127	0.8	0.0	-0.8	**0.0**	***1.0***	0.3	0.3	0.6	**0.4**	***0.8***	-0.3	-0.4	0.7	**0.0**	***1.0***
128a	-0.9	0.9	0.0	**0.0**	***1.0***	-0.4	2.9	0.5	**1.0**	***0.5***	-1.4	-0.3	-0.8	**-0.8**	***1.8***
128b	-1.0	-1.1	2.1	**0.0**	***1.0***	-3.8	-2.3	-1.9	**-2.7**	***6.3***	-2.3	1.0	-1.7	**-1.0**	***2.0***
129	0.5	-0.8	0.3	**0.0**	***1.0***	1.0	-1.1	2.9	**0.9**	***0.5***	-0.5	2.0	5.7	**2.4**	***0.2***

130a	0.0	0.2	-0.2	**0.0**	***1.0***	-0.3	0.4	0.0	**0.0**	***1.0***	-0.7	0.6	0.5	**0.1**	***0.9***
130b	0.2	0.2	-0.4	**0.0**	***1.0***	0.1	0.5	0.2	**0.3**	***0.8***	0.7	0.1	-0.7	**0.0**	***1.0***
132	-0.7	0.6	0.1	**0.0**	***1.0***	0.3	-0.5	-0.1	**-0.1**	***1.1***	-0.8	-0.5	-0.5	**-0.6**	***1.5***
133a	1.2	0.5	-1.7	**0.0**	***1.0***	0.3	-1.1	2.9	**0.7**	***0.6***	3.7	-0.4	2.3	**1.9**	***0.3***
133b	2.0	-1.1	-0.9	**0.0**	***1.0***	0.3	-2.3	1.3	**-0.2**	***1.2***	1.6	-2.0	2.4	**0.7**	***0.6***
134	1.4	-0.5	-0.9	**0.0**	***1.0***	-0.8	-0.9	-0.1	**-0.6**	***1.5***	-0.9	-1.5	-0.5	**-1.0**	***2.0***
135a	-0.5	0.0	0.4	**0.0**	***1.0***	-1.6	0.6	0.6	**-0.1**	***1.1***	-1.9	-0.8	-0.8	**-1.2**	***2.2***
135b	0.8	0.4	-1.2	**0.0**	***1.0***	2.4	0.1	-0.8	**0.6**	***0.7***	-0.1	-2.6	1.9	**-0.3**	***1.2***
137	1.3	-0.3	-1.0	**0.0**	***1.0***	0.5	0.1	0.0	**0.2**	***0.9***	-0.5	0.9	0.1	**0.2**	***0.9***
138	2.4	-0.6	-1.9	**0.0**	***1.0***	0.4	-1.2	1.6	**0.3**	***0.8***	3.1	-1.6	0.7	**0.7**	***0.6***
139	0.7	-1.0	0.3	**0.0**	***1.0***	-0.5	-2.1	1.0	**-0.5**	***1.4***	-0.9	-1.6	2.1	**-0.1**	***1.1***
140	0.0	0.0	0.0	**0.0**	***1.0***	0.1	0.2	-0.3	**0.0**	***1.0***	0.1	-0.2	-0.3	**-0.1**	***1.1***
141	0.4	-1.5	1.1	**0.0**	***1.0***	-1.0	-2.1	-1.6	**-1.6**	***3.0***	-0.3	-1.5	2.5	**0.2**	***0.9***
142-3p	0.5	-1.0	0.5	**0.0**	***1.0***	0.4	-1.8	-1.6	**-1.0**	***2.0***	-0.7	-0.5	0.3	**-0.3**	***1.2***
142-5p	1.4	0.6	-2.1	**0.0**	***1.0***	3.0	0.0	1.3	**1.4**	***0.4***	2.7	-0.6	1.3	**1.1**	***0.5***
143	-1.2	1.2	0.0	**0.0**	***1.0***	0.6	-1.9	0.9	**-0.1**	***1.1***	0.6	-0.4	1.1	**0.4**	***0.7***
145	2.5	-3.4	0.9	**0.0**	***1.0***	0.0	-4.1	2.4	**-0.6**	***1.5***	1.3	-1.8	1.7	**0.4**	***0.8***
146a	0.5	0.6	-1.1	**0.0**	***1.0***	0.5	0.5	-0.4	**0.2**	***0.9***	0.2	0.2	-0.2	**0.1**	***1.0***
146b	-0.4	0.8	-0.4	**0.0**	***1.0***	0.4	0.0	0.1	**0.2**	***0.9***	0.0	0.6	-0.3	**0.1**	***0.9***
147	0.8	-0.3	-0.5	**0.0**	***1.0***	1.8	-0.8	3.3	**1.4**	***0.4***	1.7	2.0	3.4	**2.4**	***0.2***
148a	-0.4	0.1	0.3	**0.0**	***1.0***	0.4	-0.7	-0.3	**-0.2**	***1.1***	-1.0	0.1	-0.4	**-0.4**	***1.4***
148b	0.8	-0.3	-0.6	**0.0**	***1.0***	0.8	-0.6	-0.3	**0.0**	***1.0***	0.5	0.8	-0.7	**0.2**	***0.9***
149	0.2	-0.6	0.4	**0.0**	***1.0***	0.1	-1.7	-0.2	**-0.6**	***1.5***	-0.6	-2.3	0.7	**-0.7**	***1.7***
150	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.1	-0.5	**-0.2**	***1.1***
151	0.5	0.1	-0.6	**0.0**	***1.0***	0.0	1.1	1.4	**0.8**	***0.6***	0.5	0.2	-0.2	**0.2**	***0.9***
152	-0.4	0.4	0.0	**0.0**	***1.0***	-0.8	0.5	0.6	**0.1**	***0.9***	-0.9	-0.1	-1.3	**-0.8**	***1.7***
153	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.1	-0.5	**-0.2**	***1.1***
154	0.2	0.0	-0.2	**0.0**	***1.0***	-0.9	0.1	0.4	**-0.1**	***1.1***	-0.7	-0.2	-0.4	**-0.4**	***1.4***
155	-0.9	0.3	0.6	**0.0**	***1.0***	-0.7	0.0	1.3	**0.2**	***0.9***	-0.8	-0.5	-2.0	**-1.1**	***2.1***
181a	0.2	-0.2	0.0	**0.0**	***1.0***	-0.2	1.2	0.5	**0.5**	***0.7***	0.5	0.1	0.6	**0.4**	***0.8***
181b	0.5	0.0	-0.5	**0.0**	***1.0***	0.0	0.9	1.5	**0.8**	***0.6***	-0.6	0.2	-0.3	**-0.2**	***1.2***
181c	-0.1	0.2	0.0	**0.0**	***1.0***	0.0	1.1	1.2	**0.8**	***0.6***	0.2	-1.0	-1.0	**-0.6**	***1.5***
181d	-0.1	0.5	-0.4	**0.0**	***1.0***	-0.3	0.8	0.2	**0.2**	***0.9***	-0.4	0.1	-0.1	**-0.1**	***1.1***
182	-0.9	-0.3	1.2	**0.0**	***1.0***	-2.6	-0.5	-3.0	**-2.0**	***4.1***	-2.9	-0.1	0.6	**-0.8**	***1.7***
183	0.5	-1.0	0.5	**0.0**	***1.0***	-2.4	-1.2	1.1	**-0.8**	***1.8***	-2.0	-0.8	-0.2	**-1.0**	***2.0***
184	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.1	-0.5	**-0.2**	***1.1***
186	0.6	0.6	-1.1	**0.0**	***1.0***	-0.3	0.8	0.5	**0.3**	***0.8***	0.1	-0.2	-0.5	**-0.2**	***1.1***
187	-0.2	0.2	0.0	**0.0**	***1.0***	-0.7	-0.1	0.6	**-0.1**	***1.0***	1.2	-1.1	-0.4	**-0.1**	***1.1***
188	0.3	-0.2	-0.1	**0.0**	***1.0***	-0.1	-0.3	0.9	**0.2**	***0.9***	0.4	0.9	1.0	**0.8**	***0.6***
190	0.9	-0.8	-0.1	**0.0**	***1.0***	-0.9	1.5	-1.2	**-0.2**	***1.1***	2.2	-3.2	-2.6	**-1.2**	***2.3***
191	0.1	-0.5	0.5	**0.0**	***1.0***	0.0	1.0	0.6	**0.5**	***0.7***	0.4	1.1	0.8	**0.8**	***0.6***
192	0.7	-0.4	-0.3	**0.0**	***1.0***	-0.3	-1.4	-1.3	**-1.0**	***2.0***	-0.8	-1.2	-1.1	**-1.0**	***2.0***
193a	-0.5	0.4	0.2	**0.0**	***1.0***	0.0	0.9	1.0	**0.6**	***0.6***	0.4	0.9	1.1	**0.8**	***0.6***
193b	0.4	-0.6	0.2	**0.0**	***1.0***	0.4	-1.3	0.8	**0.0**	***1.0***	0.4	-0.3	1.1	**0.4**	***0.8***
194	0.0	0.2	-0.2	**0.0**	***1.0***	-0.9	-0.1	-0.8	**-0.6**	***1.5***	-0.9	-0.3	-0.7	**-0.6**	***1.6***
195	-1.5	-0.5	2.0	**0.0**	***1.0***	-1.1	-2.1	-1.0	**-1.4**	***2.6***	-1.2	-0.4	-3.0	**-1.5**	***2.9***
196a	-0.3	0.7	-0.5	**0.0**	***1.0***	-0.5	1.5	-0.4	**0.2**	***0.9***	-0.3	0.2	-1.4	**-0.5**	***1.4***
196b	-0.3	0.4	-0.2	**0.0**	***1.0***	-0.4	0.6	-0.2	**0.0**	***1.0***	-0.5	0.3	-1.2	**-0.5**	***1.4***
197	-3.6	1.7	1.9	**0.0**	***1.0***	1.1	-0.9	1.5	**0.6**	***0.7***	1.4	0.3	0.5	**0.7**	***0.6***
198	1.3	-0.3	-1.1	**0.0**	***1.0***	0.7	-1.0	2.1	**0.6**	***0.7***	0.9	-1.2	2.4	**0.7**	***0.6***
199a	0.4	-0.3	-0.1	**0.0**	***1.0***	0.4	0.9	0.3	**0.5**	***0.7***	-0.4	0.5	0.0	**0.0**	***1.0***
199b	0.1	-0.2	0.1	**0.0**	***1.0***	0.3	1.3	0.6	**0.7**	***0.6***	0.1	0.3	-0.7	**-0.1**	***1.1***
200a*	0.5	0.1	-0.7	**0.0**	***1.0***	0.4	0.7	1.7	**0.9**	***0.5***	0.1	-0.7	2.9	**0.8**	***0.6***
200c	0.3	-0.4	0.2	**0.0**	***1.0***	-3.1	-3.3	-3.0	**-3.1**	***8.8***	-1.6	-2.4	0.3	**-1.2**	***2.4***
202*	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.1	-0.5	**-0.2**	***1.1***
203	1.1	-0.6	-0.5	**0.0**	***1.0***	-0.7	1.2	0.8	**0.4**	***0.7***	-0.5	1.6	0.3	**0.5**	***0.7***
204	0.8	0.2	-0.9	**0.0**	***1.0***	0.6	1.9	0.4	**1.0**	***0.5***	1.2	1.4	-1.2	**0.5**	***0.7***
205	1.3	-1.2	-0.1	**0.0**	***1.0***	1.2	-1.4	0.9	**0.2**	***0.9***	-1.2	-0.9	-0.3	**-0.8**	***1.7***
206	1.9	0.5	-2.4	**0.0**	***1.0***	0.9	0.8	1.7	**1.1**	***0.5***	1.6	-1.3	0.5	**0.3**	***0.8***
208	3.4	-1.2	-2.2	**0.0**	***1.0***	3.1	0.4	4.8	**2.8**	***0.1***	1.6	-1.4	1.9	**0.7**	***0.6***
210	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.1	-0.5	**-0.2**	***1.1***
211	1.0	0.2	-1.3	**0.0**	***1.0***	-0.2	1.6	1.9	**1.1**	***0.5***	0.9	-1.4	0.9	**0.1**	***0.9***
212	0.4	0.0	-0.5	**0.0**	***1.0***	0.1	0.0	0.4	**0.2**	***0.9***	0.5	-0.2	0.9	**0.4**	***0.8***
213	0.6	-0.1	-0.5	**0.0**	***1.0***	0.8	0.7	0.5	**0.7**	***0.6***	0.0	0.1	0.0	**0.0**	***1.0***
214	0.1	-1.0	0.8	**0.0**	***1.0***	0.0	-0.6	0.7	**0.0**	***1.0***	0.0	0.3	-0.1	**0.1**	***1.0***
215	1.1	0.4	-1.5	**0.0**	***1.0***	-0.3	0.8	0.5	**0.3**	***0.8***	1.1	-1.1	1.7	**0.6**	***0.7***
216	-0.6	1.1	-0.5	**0.0**	***1.0***	-0.6	2.3	0.9	**0.9**	***0.5***	-0.5	1.1	0.1	**0.2**	***0.9***
217	-0.1	0.9	-0.8	**0.0**	***1.0***	-0.3	1.6	0.4	**0.6**	***0.7***	-0.3	0.7	-0.3	**0.0**	***1.0***
218	0.3	0.5	-0.8	**0.0**	***1.0***	0.0	1.4	0.0	**0.5**	***0.7***	0.2	1.4	-0.5	**0.4**	***0.8***
219	1.3	0.0	-1.3	**0.0**	***1.0***	-0.3	-0.7	1.1	**0.0**	***1.0***	0.0	-0.1	1.2	**0.4**	***0.8***
220	0.4	0.0	-0.5	**0.0**	***1.0***	2.4	-0.2	0.1	**0.8**	***0.6***	2.4	0.2	0.9	**1.2**	***0.4***
221	0.3	0.3	-0.5	**0.0**	***1.0***	-0.1	0.3	-0.2	**0.0**	***1.0***	-0.4	0.3	-0.7	**-0.3**	***1.2***
222	0.3	-0.6	0.3	**0.0**	***1.0***	-0.1	0.2	0.3	**0.1**	***0.9***	-0.1	-0.2	-0.2	**-0.2**	***1.1***

223	0.1	1.7	-1.8	**0.0**	***1.0***	-0.1	-1.7	2.6	**0.3**	***0.8***	0.9	-2.7	2.5	**0.2**	***0.9***
224	-0.1	-0.3	0.4	**0.0**	***1.0***	0.0	1.0	0.2	**0.4**	***0.8***	-0.2	1.4	-0.3	**0.3**	***0.8***
296	-1.8	3.6	-1.8	**0.0**	***1.0***	-1.3	-3.7	-1.3	**-2.1**	***4.3***	-1.6	-1.7	-2.5	**-1.9**	***3.8***
299-5p	-0.2	-0.4	0.6	**0.0**	***1.0***	0.5	0.0	0.1	**0.2**	***0.9***	0.3	0.7	-0.6	**0.1**	***0.9***
301	-0.6	0.8	-0.2	**0.0**	***1.0***	0.4	0.4	0.3	**0.4**	***0.8***	0.0	1.7	-0.7	**0.3**	***0.8***
302a*	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-2.5	-0.5	**-0.6**	***1.6***
302b*	0.5		-0.5	**0.0**	***1.0***	0.4	-2.2	0.1	**-0.6**	***1.5***	0.4	-1.7	-1.1	**-0.8**	***1.7***
302c*	1.2	-1.4	0.3	**0.0**	***1.0***	1.2	-2.7	0.9	**-0.2**	***1.1***	1.1	-1.0	-0.4	**-0.1**	***1.1***
302d	0.9	0.5	-1.4	**0.0**	***1.0***	2.9	-2.0	2.6	**1.2**	***0.4***	2.9	0.7	1.3	**1.6**	***0.3***
320	0.3	-0.5	0.1	**0.0**	***1.0***	0.0	-0.5	0.3	**-0.1**	***1.0***	0.0	-0.6	0.2	**-0.1**	***1.1***
323	0.1	-0.5	0.4	**0.0**	***1.0***	-0.7	-0.3	-0.5	**-0.5**	***1.4***	-0.3	-0.2	-1.0	**-0.5**	***1.4***
324-3p	0.7	-1.1	0.4	**0.0**	***1.0***	0.4	-0.9	1.0	**0.2**	***0.9***	1.2	0.0	0.8	**0.7**	***0.6***
324-5p	0.4	-0.6	0.2	**0.0**	***1.0***	0.5	-0.2	0.5	**0.3**	***0.8***	0.3	0.5	-0.3	**0.2**	***0.9***
325	2.1	-1.8	-0.4	**0.0**	***1.0***	1.1	-0.5	1.8	**0.8**	***0.6***	2.1	-0.8	0.6	**0.6**	***0.6***
326	0.3	-1.2	0.9	**0.0**	***1.0***	1.0	-1.4	1.5	**0.4**	***0.8***	0.4	-0.3	2.0	**0.7**	***0.6***
328	-0.7	-0.4	1.1	**0.0**	***1.0***	2.0	-0.6	1.7	**1.0**	***0.5***	2.0	-0.2	0.5	**0.8**	***0.6***
330	-0.2	-1.0	1.2	**0.0**	***1.0***	0.1	-0.9	-0.7	**-0.5**	***1.4***	-0.7	-1.3	-0.8	**-0.9**	***1.9***
331	0.6	-1.1	0.5	**0.0**	***1.0***	0.8	-1.0	-0.7	**-0.3**	***1.2***	0.2	-0.1	-1.3	**-0.4**	***1.3***
335	-0.4	0.5	-0.1	**0.0**	***1.0***	0.1	0.9	0.1	**0.4**	***0.8***	0.4	0.8	-1.3	**0.0**	***1.0***
337	-0.4	1.2	-0.8	**0.0**	***1.0***	1.0	1.0	-0.9	**0.4**	***0.8***	0.9	1.4	-2.2	**0.0**	***1.0***
339	0.8	-0.9	0.1	**0.0**	***1.0***	0.6	-0.9	0.5	**0.1**	***1.0***	0.5	-0.5	0.5	**0.2**	***0.9***
340	-0.3	-0.1	0.4	**0.0**	***1.0***	-0.2	0.3	-0.6	**-0.2**	***1.1***	0.0	0.9	-0.9	**0.0**	***1.0***
342	0.4	-0.9	0.5	**0.0**	***1.0***	0.1	-0.4	0.1	**-0.1**	***1.0***	-0.3	-0.1	-0.9	**-0.4**	***1.4***
345	0.2	-0.5	0.3	**0.0**	***1.0***	0.0	-0.7	0.2	**-0.2**	***1.1***	-0.7	-0.1	-0.8	**-0.5**	***1.4***
346	1.2	-1.0	-0.2	**0.0**	***1.0***	1.1	-1.2	1.8	**0.6**	***0.7***	1.0	-0.9	0.2	**0.1**	***0.9***
361	0.0	0.1	-0.1	**0.0**	***1.0***	0.9	0.3	-0.4	**0.3**	***0.8***	0.7	0.3	1.4	**0.8**	***0.6***
365	0.1	-0.6	0.5	**0.0**	***1.0***	0.7	-0.9	-0.6	**-0.3**	***1.2***	0.1	0.0	-0.3	**-0.1**	***1.0***
338	-1.3	2.1	-0.8	**0.0**	***1.0***	-1.6	0.5	-0.4	**-0.5**	***1.4***	-1.2	-0.9	0.3	**-0.6**	***1.5***
367	1.1	-1.3	0.2	**0.0**	***1.0***	1.1	-1.5	0.8	**0.1**	***0.9***	1.1	-1.9	-0.5	**-0.4**	***1.4***
368	0.3	0.2	-0.5	**0.0**	***1.0***	-0.2	-0.5	0.5	**-0.1**	***1.0***	-0.3	0.3	0.9	**0.3**	***0.8***
369-3p	-1.5	1.2	0.3	**0.0**	***1.0***	-0.8	1.0	-1.1	**-0.3**	***1.2***	-1.0	-0.3	-1.7	**-1.0**	***2.0***
369-5p	-0.2	0.1	0.2	**0.0**	***1.0***	0.2	1.0	-0.4	**0.3**	***0.8***	-0.5	-0.5	-0.8	**-0.6**	***1.5***
370	0.7	0.1	-0.8	**0.0**	***1.0***	0.7	0.3	-0.2	**0.3**	***0.8***	0.4	0.2	-0.4	**0.1**	***1.0***
371	1.6	-1.6	0.0	**0.0**	***1.0***	1.5	-1.1	1.2	**0.5**	***0.7***	-0.2	-3.3	0.0	**-1.2**	***2.2***
372	1.8	-0.6	-1.2	**0.0**	***1.0***	1.5	-2.5	1.5	**0.2**	***0.9***	0.1	-3.3	0.2	**-1.0**	***2.0***
373*	0.8	0.1	-0.8	**0.0**	***1.0***	0.6	-1.8	-0.1	**-0.4**	***1.4***	1.1	-0.6	1.3	**0.6**	***0.7***
374	-0.4	0.2	0.3	**0.0**	***1.0***	0.2	-0.2	-0.9	**-0.3**	***1.2***	-0.3	1.4	-2.2	**-0.4**	***1.3***
375	0.0	1.8	-1.7	**0.0**	***1.0***	-2.0	-1.8	-2.9	**-2.2**	***4.7***	-1.2	-2.6	2.6	**-0.4**	***1.3***
376a	-0.3	1.8	-1.5	**0.0**	***1.0***	-0.1	-0.1	-1.6	**-0.6**	***1.5***	-0.7	0.0	-2.3	**-1.0**	***2.0***
378	-0.1	0.1	0.0	**0.0**	***1.0***	-0.3	1.0	-0.6	**0.0**	***1.0***	0.4	0.2	-0.3	**0.1**	***0.9***
379	-0.8	1.1	-0.2	**0.0**	***1.0***	-0.4	0.4	-0.5	**-0.2**	***1.1***	-0.2	1.1	-1.9	**-0.3**	***1.3***
380-3p	-1.4	0.6	0.9	**0.0**	***1.0***	0.4	1.4	-0.7	**0.4**	***0.8***	-0.6	0.7		**0.1**	***1.0***
381	1.6	-1.8	0.1	**0.0**	***1.0***	1.1	2.5	0.9	**1.5**	***0.4***	1.7	1.6	1.3	**1.5**	***0.3***
382	0.0	0.7	-0.7	**0.0**	***1.0***	0.9	0.7	-0.8	**0.3**	***0.8***	-0.2	1.5	-0.6	**0.2**	***0.9***
383	2.0	-1.2	-0.8	**0.0**	***1.0***	1.7	0.3	0.5	**0.8**	***0.6***	1.2	-0.3	0.0	**0.3**	***0.8***
409-5p	-0.4	0.1	0.3	**0.0**	***1.0***	0.3	0.9	-0.6	**0.2**	***0.9***	-0.6	0.1	-0.1	**-0.2**	***1.1***
422a	1.7	-0.5	-1.2	**0.0**	***1.0***	1.6	0.4	0.1	**0.7**	***0.6***	1.0	1.6	0.9	**1.2**	***0.4***
422b	0.2	1.3	-1.5	**0.0**	***1.0***	0.2	0.8	-0.8	**0.1**	***1.0***	0.5	1.1	0.0	**0.5**	***0.7***
423	-0.7	-0.1	0.8	**0.0**	***1.0***	0.3	0.0	0.6	**0.3**	***0.8***	-0.1	0.8	0.6	**0.4**	***0.7***
424	-1.2	1.0	0.2	**0.0**	***1.0***	-0.6	2.1	-0.6	**0.3**	***0.8***	-1.0	0.9	-1.4	**-0.5**	***1.4***
425	-0.6	0.7	-0.1	**0.0**	***1.0***	-0.1	0.1	-0.2	**-0.1**	***1.0***	-0.7	0.0	-1.0	**-0.6**	***1.5***
429	-1.2	0.4	0.7	**0.0**	***1.0***	-2.1	0.5	-2.0	**-1.2**	***2.3***	-1.9	-0.7	0.4	**-0.7**	***1.7***
432	-0.8	1.0	-0.2	**0.0**	***1.0***	-0.7	0.8	-0.8	**-0.2**	***1.2***	-0.5	0.4	-1.6	**-0.6**	***1.5***
433	-0.5	0.2	0.3	**0.0**	***1.0***	-0.4	-0.3	-0.2	**-0.3**	***1.2***	-0.5	-0.1	-0.9	**-0.5**	***1.4***
449	-1.5	0.0	1.5	**0.0**	***1.0***	-0.8	0.5	-1.4	**-0.6**	***1.5***	0.1	0.5	-1.2	**-0.2**	***1.1***
450	-1.6	1.8	-0.2	**0.0**	***1.0***	-1.9	1.0	-0.9	**-0.6**	***1.5***	-0.6	0.6	-1.3	**-0.4**	***1.4***
451	1.7	-1.0	-0.7	**0.0**	***1.0***	1.7	-2.0	-1.5	**-0.6**	***1.5***	1.7	0.8	-2.9	**-0.1**	***1.1***
452	-0.2	1.3	-1.0	**0.0**	***1.0***	-0.3	0.6	-1.1	**-0.3**	***1.2***	-0.6	1.1	-0.7	**-0.1**	***1.0***
485-5p	0.1	1.0	-1.1	**0.0**	***1.0***	0.3	0.3	-1.1	**-0.2**	***1.1***	0.3	1.4	0.5	**0.7**	***0.6***
489	0.1	-0.7	0.6	**0.0**	***1.0***	1.6	-0.5	0.4	**0.5**	***0.7***	-0.1	0.3	-0.7	**-0.2**	***1.1***
490	1.0	0.5	-1.5	**0.0**	***1.0***	0.2	-0.6	0.6	**0.1**	***1.0***	0.7	-0.2	2.4	**1.0**	***0.5***
491	-0.4	0.0	0.4	**0.0**	***1.0***	-0.3	0.2	0.0	**0.0**	***1.0***	-0.2	0.1	-0.1	**-0.1**	***1.0***
494	-0.9	0.1	0.8	**0.0**	***1.0***	-0.3	0.3	0.2	**0.1**	***1.0***	0.0	-0.1	-0.5	**-0.2**	***1.1***
496	-0.1	0.4	-0.3	**0.0**	***1.0***	0.2	1.6	-0.6	**0.4**	***0.8***	-0.5	0.3	0.5	**0.1**	***0.9***
497	-1.2	1.0	0.2	**0.0**	***1.0***	-1.3	0.9	-0.8	**-0.4**	***1.3***	-1.0	1.0	-1.3	**-0.4**	***1.4***
500	-0.9	0.4	0.5	**0.0**	***1.0***	-0.9	-0.3	-0.3	**-0.5**	***1.4***	-0.5	0.3	-0.4	**-0.2**	***1.1***
501	-0.8	0.4	0.4	**0.0**	***1.0***	-0.5	0.7	0.0	**0.1**	***1.0***	-0.1	0.6	-0.1	**0.1**	***0.9***
502	-0.1	1.7	-1.6	**0.0**	***1.0***	0.7	1.2	-2.0	**0.0**	***1.0***	0.4	2.0	-2.2	**0.1**	***1.0***
505	-1.2	0.8	0.3	**0.0**	***1.0***	-0.8	1.4	-0.7	**0.0**	***1.0***	-0.7	0.5	-0.9	**-0.4**	***1.3***
506	0.5	-0.1	-0.4	**0.0**	***1.0***	0.1	-0.2	0.9	**0.3**	***0.8***	0.8	-0.3	0.0	**0.2**	***0.9***
508	0.4	-0.1	-0.3	**0.0**	***1.0***	-0.3	1.8	0.6	**0.7**	***0.6***	0.4	2.5	1.0	**1.3**	***0.4***
509	-0.3	0.2	0.1	**0.0**	***1.0***	-0.4	-0.5	0.1	**-0.3**	***1.2***	1.2	1.3	-1.3	**0.4**	***0.8***
510	-0.6	0.0	0.6	**0.0**	***1.0***	0.0	-1.1	-0.1	**-0.4**	***1.3***	-0.5	1.4	4.8	**1.9**	***0.3***

511	1.2	-0.1	-1.1	**0.0**	***1.0***	-0.6	0.5	0.2	**0.0**	***1.0***	-1.8	-1.2	1.5	**-0.5**	***1.4***
512-5p	-1.1	0.7	0.5	**0.0**	***1.0***	-0.1	-0.1	2.2	**0.7**	***0.6***	1.3	-0.9	-0.7	**-0.1**	***1.1***
513	0.8	-0.6	-0.2	**0.0**	***1.0***	-2.5	-0.7	-1.3	**-1.5**	***2.8***	0.7	0.0	0.4	**0.4**	***0.8***
514	2.2	-1.7	-0.4	**0.0**	***1.0***	-0.7	0.7	-0.4	**-0.1**	***1.1***	-2.5	-1.5	2.0	**-0.7**	***1.6***
515-3p	-0.2	2.0	-1.8	**0.0**	***1.0***	-1.3	1.4	-2.1	**-0.7**	***1.6***	-0.9	-0.6	3.4	**0.6**	***0.6***
515-5p	0.8	-0.7	-0.1	**0.0**	***1.0***	-1.0	-0.8	0.5	**-0.4**	***1.4***	0.8	0.0	-1.4	**-0.2**	***1.1***
516-3p	-0.1	0.5	-0.4	**0.0**	***1.0***	0.4	-0.6	0.1	**0.0**	***1.0***	0.1	0.6	-0.6	**0.0**	***1.0***
517a	0.8	-0.7	-0.1	**0.0**	***1.0***	0.8	-0.8	0.5	**0.2**	***0.9***	0.8	0.0	0.3	**0.4**	***0.8***
517b	0.8	-0.7	-0.1	**0.0**	***1.0***	0.8	-0.8	0.5	**0.2**	***0.9***	0.8	0.0	0.3	**0.4**	***0.8***
517c	1.7	0.2	-1.9	**0.0**	***1.0***	1.7	0.1	1.2	**1.0**	***0.5***	1.7	-1.4	1.2	**0.5**	***0.7***
518a	-1.2	0.2	1.0	**0.0**	***1.0***	1.3	-0.8	1.9	**0.8**	***0.6***	0.4	2.2	0.2	**0.9**	***0.5***
518b	0.6	0.4	-1.0	**0.0**	***1.0***	0.2	0.6	0.6	**0.5**	***0.7***	1.0	0.6	1.4	**1.0**	***0.5***
518c	1.7	0.2	-2.0	**0.0**	***1.0***	0.1	-0.7	-0.4	**-0.3**	***1.3***	-1.6	-0.6	1.3	**-0.3**	***1.2***
518d	0.6	0.4	-1.1	**0.0**	***1.0***	0.5	0.1	1.2	**0.6**	***0.7***	2.0	0.2	1.1	**1.1**	***0.5***
518e	0.2	0.9	-1.1	**0.0**	***1.0***	0.5	-0.2	0.1	**0.1**	***0.9***	0.0	-1.6	-0.1	**-0.6**	***1.5***
519b	0.8	-0.7	-0.1	**0.0**	***1.0***	0.8	-0.8	0.5	**0.2**	***0.9***	0.8	0.0	0.3	**0.4**	***0.8***
519c	-0.5	0.4	0.1	**0.0**	***1.0***	-1.4	-2.8	-0.5	**-1.6**	***3.0***	1.9	0.7	-1.5	**0.4**	***0.8***
519d	0.4	-0.3	-0.1	**0.0**	***1.0***	0.3	0.7	-0.4	**0.2**	***0.9***	-0.3	-0.7	-0.1	**-0.4**	***1.3***
519e	0.3	0.3	-0.6	**0.0**	***1.0***	-0.7	0.2	0.5	**0.0**	***1.0***	0.9	1.0	1.6	**1.2**	***0.4***
520a	0.9	1.0	-1.9	**0.0**	***1.0***	-0.8	-0.5	-0.3	**-0.5**	***1.4***	2.5	-0.9	-0.3	**0.4**	***0.7***
520b	-0.4	0.6	-0.3	**0.0**	***1.0***	-1.7	-2.8	-1.4	**-2.0**	***3.9***	-0.8	-2.1	-1.4	**-1.4**	***2.7***
520c	-0.5	0.2	0.3	**0.0**	***1.0***	-2.1	0.1	0.5	**-0.5**	***1.4***	-1.5	0.1	-1.6	**-1.0**	***2.0***
520d	1.2	0.3	-1.5	**0.0**	***1.0***	0.6	-0.4	0.7	**0.3**	***0.8***	1.3	0.3	0.2	**0.6**	***0.7***
520e	0.8	-0.7	-0.1	**0.0**	***1.0***	0.8	-0.8	0.5	**0.2**	***0.9***	0.8	0.0	0.3	**0.4**	***0.8***
520f	0.5	-0.4	-0.1	**0.0**	***1.0***	0.0	-0.1	-0.2	**-0.1**	***1.1***	0.7	1.0	2.6	**1.4**	***0.4***
520g	0.8	-0.7	-0.1	**0.0**	***1.0***	-1.9	-0.7	0.5	**-0.7**	***1.6***	-0.5	0.0	0.3	**-0.1**	***1.0***
520h	0.4	-0.1	-0.2	**0.0**	***1.0***	0.3	-1.6	-0.9	**-0.7**	***1.7***	1.4	-0.9	0.9	**0.5**	***0.7***
521	0.0	-0.6	0.6	**0.0**	***1.0***	0.3	0.2	0.5	**0.3**	***0.8***	1.7	-0.8	1.2	**0.7**	***0.6***
522	0.8	-0.7	-0.1	**0.0**	***1.0***	0.8	-0.8	0.5	**0.2**	***0.9***	0.8	0.0	0.3	**0.4**	***0.8***
523	-0.3	0.5	-0.2	**0.0**	***1.0***	-0.5	-0.1	-0.1	**-0.2**	***1.2***	-0.4	1.2	1.0	**0.6**	***0.7***
526a	-0.2	0.4	-0.1	**0.0**	***1.0***	1.8	0.3	1.6	**1.2**	***0.4***	1.5	-1.5	1.4	**0.5**	***0.7***
526b	0.8	-0.6	-0.2	**0.0**	***1.0***	0.8	-0.7	-1.0	**-0.3**	***1.2***	0.9	-1.8	0.4	**-0.2**	***1.1***
let-7-a	-0.3	0.4	-0.1	**0.0**	***1.0***	0.4	0.4	-0.9	**0.0**	***1.0***	-0.1	0.5	-1.0	**-0.2**	***1.1***
let-7-b	-0.5	0.8	-0.3	**0.0**	***1.0***	-0.1	0.1	-0.4	**-0.1**	***1.1***	-0.5	0.2	-0.8	**-0.4**	***1.3***
let-7-c	-0.2	0.8	-0.6	**0.0**	***1.0***	0.1	1.4	-0.5	**0.3**	***0.8***	-0.1	1.7	-0.1	**0.5**	***0.7***
let-7-d	-0.4	0.2	0.2	**0.0**	***1.0***	0.2	0.5	-0.2	**0.2**	***0.9***	-0.2	1.6	0.4	**0.6**	***0.7***
let-7-e	-0.5	1.0	-0.4	**0.0**	***1.0***	1.1	0.1	-1.2	**0.0**	***1.0***	0.9	0.4	-0.5	**0.3**	***0.8***
let-7-f	-1.6	1.4	0.2	**0.0**	***1.0***	-0.8	1.8	-1.4	**-0.1**	***1.1***	-1.0	2.0	-2.4	**-0.5**	***1.4***
let-7-g	-1.3	0.9	0.4	**0.0**	***1.0***	-1.0	1.4	-1.1	**-0.2**	***1.2***	-0.7	1.7	-1.5	**-0.2**	***1.1***
let-7-i	-1.2	1.4	-0.2	**0.0**	***1.0***	-1.2	0.9	-0.5	**-0.3**	***1.2***	0.7	1.4	-1.0	**0.4**	***0.8***