

7 Anhang

7.1 Abkürzungsverzeichnis

μ	mikro
Abb.	Abbildung
ARE	<i>AU-rich elements</i>
bwz.	beziehungsweise
ca.	cirka
cDNA	komplementäre Desoxyribonukleinsäure
CRD	<i>coding region instability determinant</i>
CRD-BP	<i>CRD binding protein</i>
d.h.	das heißt
DNA	Desoxyribonukleinsäure
EDTA	Ethylendiamintetraessigsäure
EGTA	Ethylenglycol-bis(2-aminoethyl)-tetraessigsäure
eIF	eukaryotischer Translationsinitiationsfaktor
et al.	<i>et altera</i>
evtl.	eventuell
FFL	<i>firefly</i> Luziferase
g	Erdbeschleunigung, Zentrifugationsgeschwindigkeit
g	Gramm
GFP	<i>green fluorescent protein</i>
h	Stunde
hnRNP	<i>heterologous nuclear ribonucleoproteins</i>
IF	Immunfluoreszenz
Imp	<i>IGF-II mRNA binding protein</i>
IP	Immunopräzipitation
kb	Kilobasenpaare
KH	<i>hnRNP K homology domain</i>
L	Liter
LB	Luria Bertani
m	milli
M	Molar

mAK	monoklonaler Antikörper
min	Minute
mind.	mindestens
mRNA	<i>messenger</i> Ribonukleinsäure
mRNP	<i>messenger</i> Ribonukleoprotein
n	nano
NLS	<i>nuclear localization signal</i>
nt	Nukleotide
o.a.	oben aufgeführt
ORF	<i>open reading frame</i>
pAK	polyklonaler Antikörper
PB	processing body
PBs	<i>processing bodies</i>
PCR	Polymerasekettenreaktion
PFA	Paraformaldehyd
pH	<i>Potentium Hydrogenii</i>
qRT-PCR	quantitative reverse Transkriptase PCR
RBP	RNA bindendes Protein
RNA	Ribonukleinsäure
Rnase	Ribonuklease
RNasin	RNase Inhibitor
Rpm	<i>rounds per minute</i> , Zentrifugationsgeschwindigkeit
RL	<i>renilla</i> Luziferase
RRM	RNA recognition motif
RT	reverse Transkriptase
RT-PCR	reverse Transkriptase PCR
SDS-PAGE	denaturierendes Polyacrylamid-Gel
SG	stress granule
siRNA	<i>small interfering RNA</i>
Tris	Tris(hydroxymethyl)aminomethan
Tween20	Polyoxyethylensorbitan-Monolaurylsäure
u.a.	und andere
UTR	untranslatierte Region
WB	Western Blot

YFP	<i>yellow fluorescent protein</i>
z.B.	zum Beispiel
z.T.	zum Teil
ZBP1	<i>Zipcode binding protein 1</i>

7.2 Transfektionen

Tab. 6.1: Transfektionen. In der Tabelle sind die Mengen der transfizierten DNA sowie des Lipofektamines 2000 zusammengefasst, welche in den einzelnen Experimenten verwendet wurden.

Versuch	TC-Platten-größe	siRNAs	DNA	Lipofectamine 2000	Zeit
Knockdown	6well	250 pmol		4 µL	72 h
	10 cm	1,5 nmol		24 µL	72 h
Immunfluoreszenz	24well		250 ng je GFP-/RFP-Fusionsplasmid	1 µL	24 h
MS2-tethering	24well		100 ng GFP-NLS-MS2BP 500 ng MS2-Reporter	1,5 µL	24 h
Knockdown und MS2-tethering	6well	250 pmol		4 µL	72 h
	24well		100 ng GFP-NLS-MS2BP 500 ng MS2-Reporter 250 ng RFP-DCP1	1,5 µL	24h
TriFC	24well		250 ng YFPN-Flag-ZBP1 250 ng YFPC-HA-MS2BP 500 ng MS2-Reporter	1,5 µL	24 h
Stress/Erholung			Siehe 3.1.3.7		

7.3 Daten der Mikroarray-Analyse

Tab. 6.2: Daten der Mikroarray-Analyse. Vollständige Liste der durch Auswertung mit der MAS 5.0 software als present (P) in der Kontrolle und absent (A) nach ZBP1 Knockdown eingestufteten Gene.

Microarray			Microarray data	
Probe Set ID	Gene Symbol	Gene Title	control	ZBP1
234962_at	---	---	P 404,2	A 9
232916_at	---	---	P 314,3	A 14,5
243822_at	---	---	P 429,1	A 22,9
216556_x_at	---	---	P 331,2	A 21,4
1560412_at	---	---	P 318,4	A 24,9
1564949_at	---	---	P 342,5	A 28,6
243718_at	---	---	P 320,5	A 27,9
236129_at	---	---	P 366,9	A 39,8
213215_at	AP3S2	Adaptor-related protein complex 3, sigma 2 subunit	P 333,4	A 34,9
221590_s_at	ALDH6A1	Aldehyde dehydrogenase 6 family, member A1	P 397,6	A 30,7
227533_at	ANGPTL1	Angiopoietin-like 1	P 323,8	A 28,1

213001_at	ANGPTL2	angiopoietin-like 2	P 983,7	A 95,6
206252_s_at	AVPR1A	arginine vasopressin receptor 1A	P 300,8	A 30,6
234210_x_at	ACTR2	ARP2 Aktin-related protein 2 homolog (yeast)	P 349,4	A 30,8
243792_x_at	AHDC1	AT hook, DNA binding motif, containing 1	P 376,1	A 45,5
217586_x_at	ATXN2	Ataxin 2	P 795,3	A 55,3
1556595_at	WWOX	B-box and SPRY domain containing	P 368	A 21
206665_s_at	BCL2L1	BCL2-like 1	P 391,5	A 36,7
223916_s_at	BCOR	BCL6 ko-repressor	P 333,9	A 41,7
91920_at	BCAN	brevican	P 380,1	A 47
238612_at	BRD4	Bromodomain containing 4	P 495,6	A 44,9
223499_at	C1QTNF5	C1q and tumor necrosis factor related protein 5	P 342,3	A 40
233214_at	---	CDNA FLJ11900 fis, clone HEMBA1007341	P 423,5	A 44,6
227383_at	---	CDNA FLJ36837 fis, clone ASTRO2011422	P 546,6	A 27,8
230292_at	---	CDNA FLJ43180 fis, clone FCBBF3013846	P 321,1	A 12,6
216739_at	---	CDNA: FLJ20874 fis, clone ADKA02818	P 405	A 20,7
1562669_at	---	CDNA: FLJ21540 fis, clone COL06156	P 324,6	A 6,2
218178_s_at	CHMP1B	chromatin modifying protein 1B	P 543	A 65,7
228517_at	C1orf149	chromosome 1 open reading frame 149	P 324,6	A 38,2
204073_s_at	C11orf9	chromosome 11 open reading frame 9	P 499,2	A 24,1
233941_at	C14orf166B	Chromosome 14 open reading frame 166B	P 446,3	A 47,1
232619_at	C20orf134	chromosome 20 open reading frame 134	P 490,5	A 50,9
1566927_at	C21orf104	chromosome 21 open reading frame 104	P 317,7	A 39,5
231175_at	C6orf65	chromosome 6 open reading frame 65	P 423,2	A 39
224987_at	C6orf89	chromosome 6 open reading frame 89	P 305,6	A 28,7
1557805_at	C9orf77	Chromosome 9 open reading frame 77	P 392,6	A 12,3
236582_at	CPSF6	Cleavage and polyadenylation specific factor 6, 68kDa confirm sequence	P 310,3	A 11,2
211913_s_at	MERTK	c-mer proto-oncogene tyrosine kinase /// c-mer proto-oncogene tyrosine kinase	P 320,9	A 16,5
1569642_at	F2R	coagulation factor II (thrombin) receptor	P 549,2	A 61,6
242194_at	CUL4A	Cullin 4A	P 449,3	A 51,9
220153_at	ENTPD7	ectonucleoside triphosphate diphosphohydrolase 7	P 339,7	A 37,5
228952_at	ENPP1	EctoNukleotide pyrophosphatase/phosphodiesterase 1 epilepsy, progressive myoclonus type 2A, Lafora disease (laforin)	P 405,2	A 17,3
205231_s_at	EPM2A		P 465,3	A 24,4
237262_at	FAM59A	Family with sequence similarity 59, member A	P 395,2	A 5,2
227002_at	FAM78A	family with sequence similarity 78, member A	P 365,4	A 38,9
240891_at	FSTL1	Follistatin-like 1	P 479,5	A 52,7
226470_at	GGTL3	gamma-glutamyltransferase-like 3	P 551,3	A 46,7
1558950_at	---	Homo sapiens, clone IMAGE:4649634, mRNA	P 331,7	A 19,3
1558784_at	---	Homo sapiens, clone IMAGE:4701563, mRNA Homo sapiens, clone IMAGE:5218355, mRNA ///	P 392,1	A 43,7
239958_at	---	CDNA FLJ41997 fis, clone SPLEN2029176	P 362,6	A 12,2
236555_at	---	Homo sapiens, clone IMAGE:5223057, mRNA	P 349,3	A 21,5
230812_at	LOC440462	hypothetical gene supported by AK000477	P 366	A 30,7
231987_at	LOC401212	Hypothetical protein DKFZp586C0721	P 527,5	A 42,5
239922_at	FLJ14397	hypothetical protein FLJ14397	P 316,7	A 22,2
1563945_at	LOC284100	hypothetical protein LOC284100	P 303,8	A 18,8
223469_at	MGC10812	hypothetical protein MGC10812	P 522,4	A 30
227313_at	MGC40499	hypothetical protein MGC40499	P 923,4	A 27,5
216493_s_at	IMP-3	IGF-II mRNA-binding protein 3	P 16565,2	A 16,4
216494_at	IMP-3	IGF-II mRNA-binding protein 3	P 644	A 11,7
201015_s_at	JUP	junction plakoglobin	P 373,7	A 35,1
234671_at	KRTAP4-2	keratin associated protein 4-2	P 513,3	A 5,9
235674_at	KIAA0922	KIAA0922 protein	P 398,9	A 21,1
1554438_at	KIAA1217	KIAA1217	P 341,7	A 25,3
1554253_a_at	LASS3	LAG1 longevity assurance homolog 3 (S. cerevisiae)	P 303,1	A 28,6
222346_at	LAMA1	laminin, alpha 1	P 496,9	A 22,4

1553329_at	LOC136263	LOC136263	P 341,6	A 29,4
1560842_a_at	LOC440132	LOC440132	P 307,2	A 23,2
1555977_at	LOC440476	LOC440476	P 348,6	A 14,4
242505_at	LOC440962	LOC440962	P 302,5	A 31,5
243361_at	LEF1	lymphoid enhancer-binding factor 1	P 354,6	A 11,3
208166_at	MMP16	matrix metalloproteinase 16 (membrane-inserted)	P 380,2	A 26,2
242223_at	MCCC1	Methylcrotonoyl-Coenzyme A carboxylase 1 (alpha)	P 456,5	A 27,7
241478_at	MICAL-L2	MICAL-like 2	P 341	A 28
230224_at	MCART6	Mitochondrial carrier triple repeat 6	P 347,9	A 11,9
223743_s_at	MRPL4	mitochondrial ribosomal protein L4	P 326,4	A 10,5
223357_s_at	MTIF3	mitochondrial translational initiation factor 3	P 313,7	A 37,8
204708_at	MAPK4	mitogen-activated protein kinase 4	P 307,5	A 19
233481_at	---	MRNA; cDNA DKFZp566O1624 (from clone DKFZp566O1624)	P 343,9	A 21,2
235965_at	---	MRNA; cDNA DKFZp779C0742 (from clone DKFZp779C0742)	P 535,5	A 32,9
206237_s_at	NRG1	neuregulin 1	P 563,2	A 38,9
209982_s_at	NRXN2	neurexin 2	P 312,4	A 37,5
228278_at	NFIX	nuclear factor I/X (CCAAT-binding transcription factor)	P 327,2	A 28,8
1561123_at	PRRX1	Paired related homeobox 1	P 308,1	A 19,8
230714_s_at	ZNF286	Peroxisome proliferative activated receptor, alpha-like	P 683,1	A 29
228006_at	PTEN	Phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	P 328,8	A 37,5
215409_at	LOC254531	PLSC domain containing protein	P 340,7	A 22
233053_at	PB1	Polybromo 1	P 364,6	A 23,4
239834_at	KCTD1	Potassium channel tetramerisation domain containing 1	P 324,8	A 9
242022_at	PBX1	Pre-B-cell leukemia transcription factor 1	P 422,6	A 39,7
215837_x_at	PRO1621	PRO1621 protein	P 314,8	A 39,3
230374_at	PPP1R14B	protein phosphatase 1, regulatory (inhibitor) subunit 14B	P 421,2	A 42,3
237669_at	PTPDC1	Protein tyrosine phosphatase domain containing 1	P 373,1	A 18,8
215987_at	RAPGEF2	Rap guanine Nucleotide exchange factor (GEF) 2	P 456,9	A 22,7
232053_x_at	RHBDL7	rhomboid, veinlet-like 7 (Drosophila)	P 547,5	A 14,8
204635_at	RPS6KA5	ribosomal protein S6 kinase, 90kDa, polypeptide 5	P 341,4	A 40,7
201205_at	RRBP1	ribosome binding protein 1 homolog 180kDa (dog)	P 408,9	A 36,2
233337_s_at	SEZ6L2	seizure related 6 homolog (mouse)-like 2	P 345,1	A 29,1
233168_s_at	SELO	selenoprotein O	P 585,4	A 68,6
202695_s_at	STK17A	serine/threonine kinase 17a (apoptosis-inducing)	P 431,2	A 44,2
231806_s_at	STK36	serine/threonine kinase 36 (fused homolog, Drosophila)	P 377,9	A 26,7
220030_at	STYK1	serine/threonine/tyrosine kinase 1	P 389,8	A 28,2
221696_s_at	STYK1	serine/threonine/tyrosine kinase 1 /// serine/threonine/tyrosine kinase 1	P 403,1	A 30,7
227923_at	SHANK3	SH3 and multiple ankyrin repeat domains 3	P 415,7	A 29,5
235680_at	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)	P 304,8	A 30
231658_x_at	LOC127295/391209	similar to 60S ribosomal protein L36 /// similar to ribosomal protein L36	P 568,4	A 56,5
242577_at	LOC389833	Similar to hypothetical protein MGC27019	P 588,4	A 20,4
212000_at	SFRS14	splicing factor, arginine/serine-rich 14	P 333,4	A 14,3
243805_at	ST8SIA6	ST8 alpha-N-acetyl-neuraminide alpha-2,8- sialyltransferase 6	P 503,6	A 28,6
244404_at	STXBP4	syntaxin binding protein 4	P 416,2	A 23,3
226613_at	TBC1D10A	TBC1 domain family, member 10A	P 320,5	A 24,2
1560553_at	TIAF1	TGFB1-induced anti-apoptotic factor 1	P 353	A 39,5
233675_s_at	LOC374491	TPTE and PTEN homologous inositol lipid phosphatase pseudogene	P 313,9	A 36,1
243114_at	---	Transcribed locus	P 394	A 14,3
243961_at	---	Transcribed locus	P 368,5	A 25,4
235660_at	---	Transcribed locus, moderately similar to XP_536558.2 PREDICTED: similar to reverse transcriptase [Canis familiaris]	P 339,9	A 39,3
241530_at	---	Transcribed locus, strongly similar to NP_077144.1 RIO	P 308,4	A 8,9

		kinase 3 [Mus musculus]		
244575_at	---	Transcribed locus, strongly similar to NP_694873.1 hydroxysteroid dehydrogenase-2, delta<5>-3-beta [Mus musculus]	P 334,6	A 26,6
240680_at	---	Transcribed locus, strongly similar to XP_085831.2 PREDICTED: hypothetical protein XP_085831 [Homo sapiens]	P 340,9	A 26,3
241853_at	---	Transcribed locus, strongly similar to XP_513591.1 PREDICTED: hypothetical protein XP_513591 [Pan troglodytes]	P 332,5	A 11,6
228623_at	---	Transcribed locus, weakly similar to XP_517454.1 PREDICTED: similar to hypothetical protein MGC45438 [Pan troglodytes]	P 359,6	A 29
232372_at	TULP4	Tubby like protein 4	P 319,6	A 28,5
205652_s_at	TTLL1	tubulin tyrosine ligase-like family, member 1	P 349,8	A 26,6
224836_at	TP53INP2	tumor protein p53 inducible nuclear protein 2	P 387,1	A 46,4
230967_s_at	USP7	Unknown protein	P 367,4	A 23,6
238248_at	UMOD	Uromodulin (uromucoid, Tamm-Horsfall glycoprotein)	P 449,7	A 30,8
1556412_at	ZBTB40	Zinc finger and BTB domain containing 40	P 436,4	A 16,2
207394_at	ZNF137	zinc finger protein 137 (clone pHZ-30)	P 329,3	A 7,8
238994_at	ZA20D1	Zinc finger, A20 domain containing 1	P 310,3	A 21,7