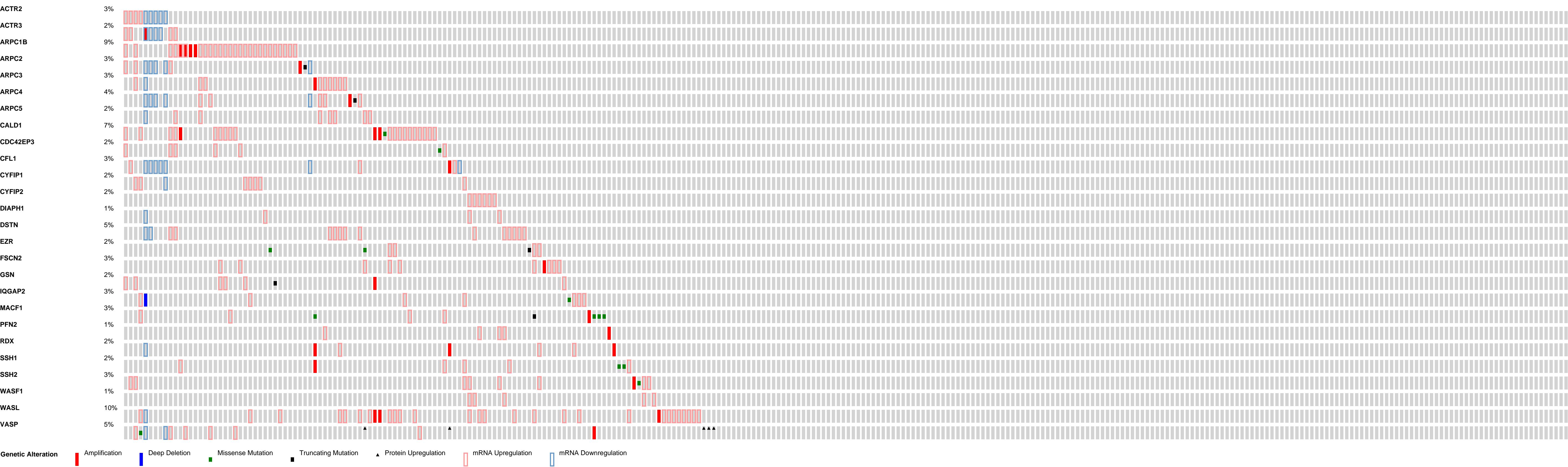
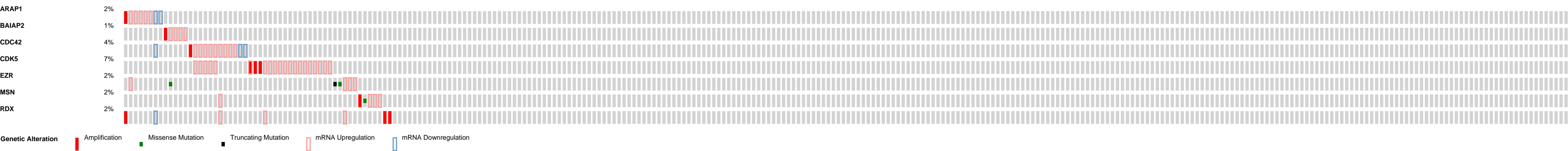
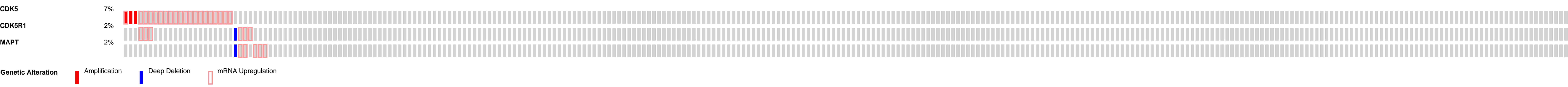
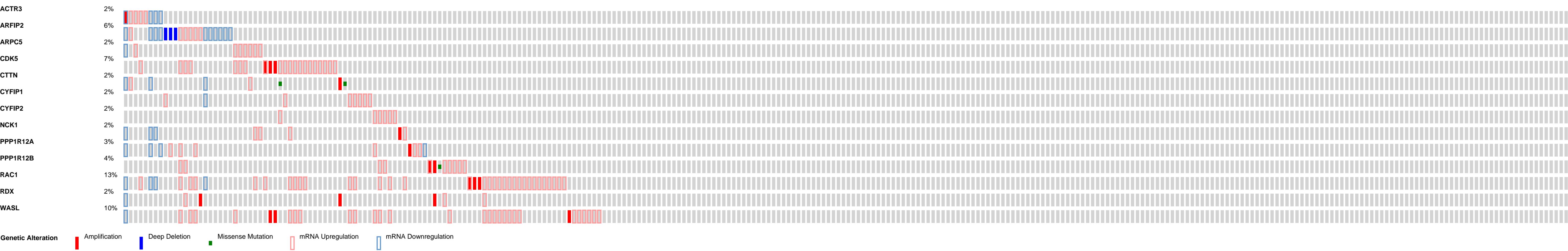


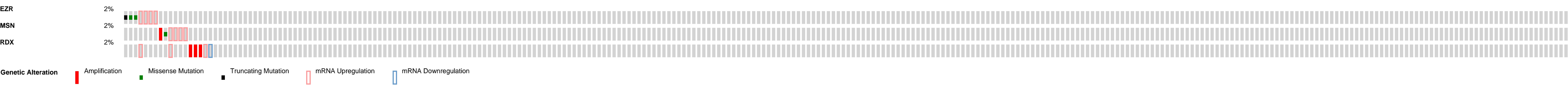
**Supplementary Figure 1.** Genetic alteration analysis of all the 85 cytoskeleton regulators from 291 patients analyzed in this study.

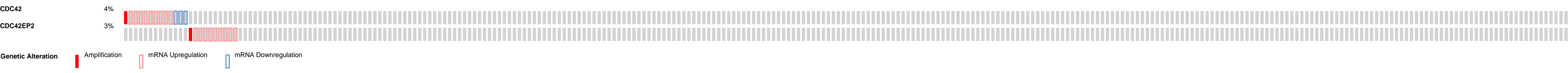


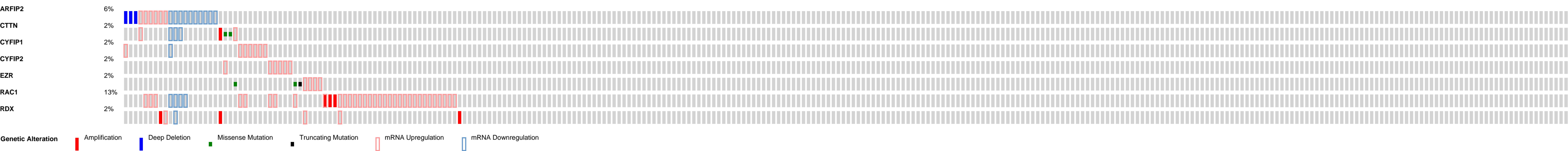


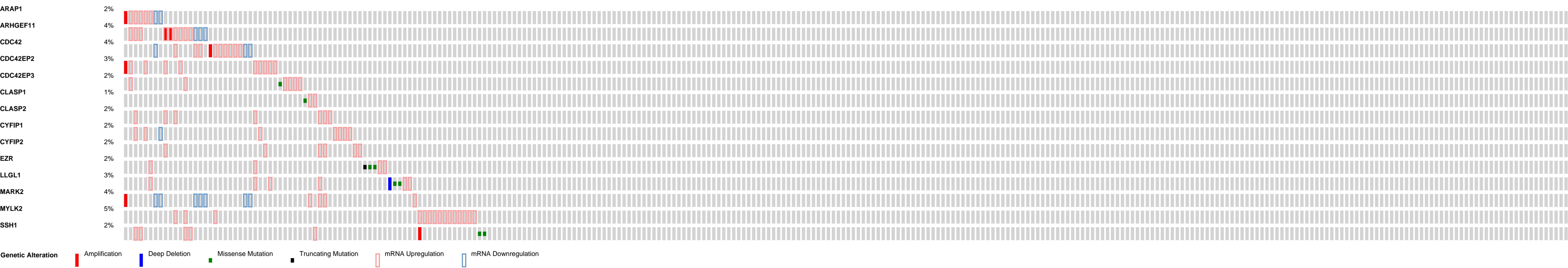


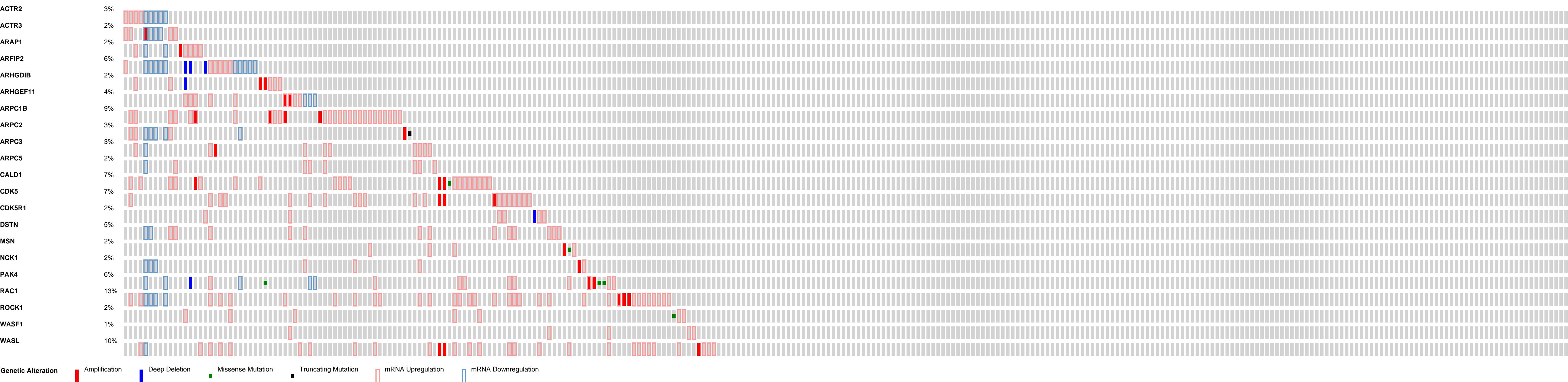


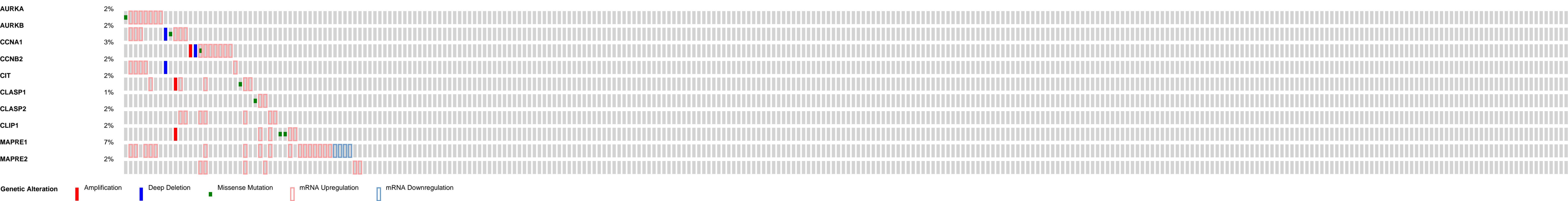












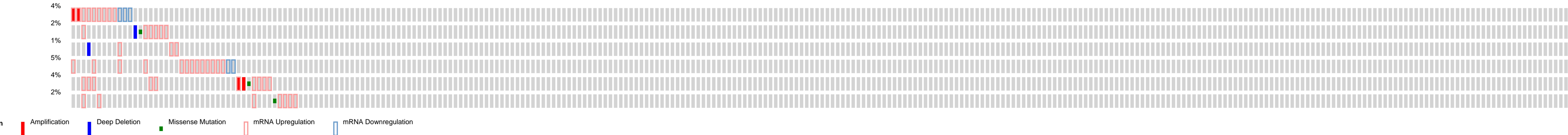
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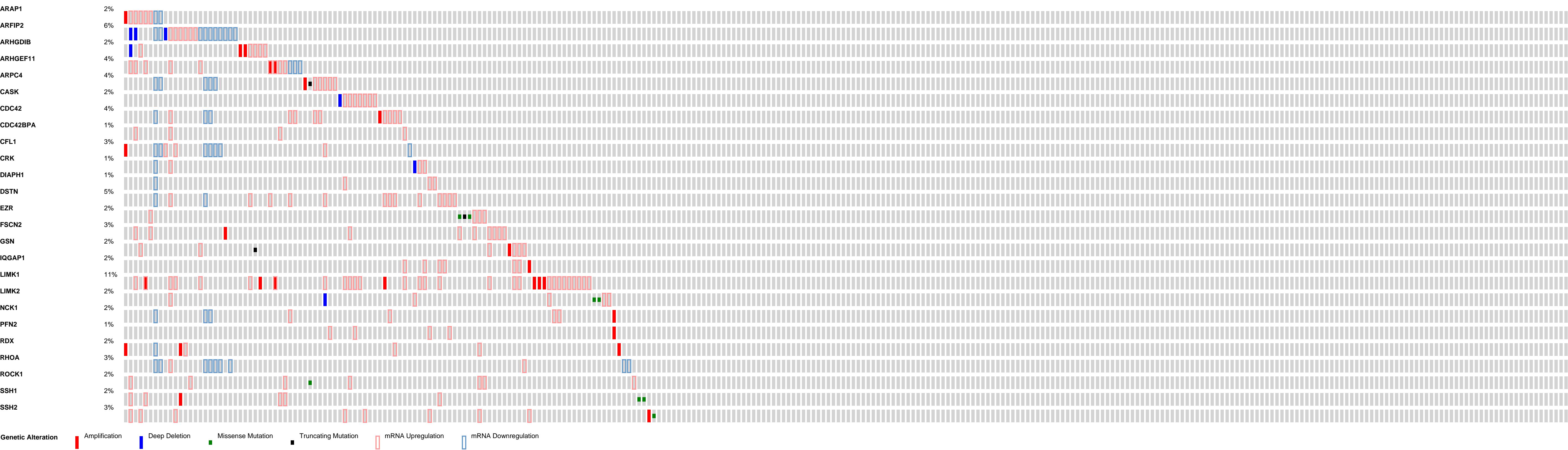
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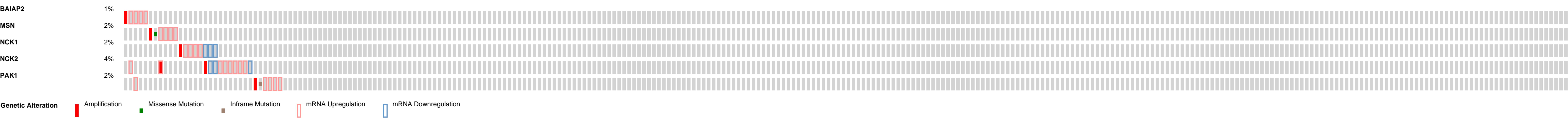
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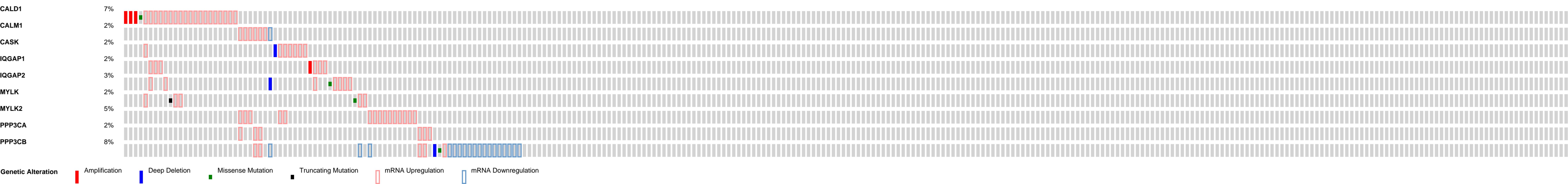
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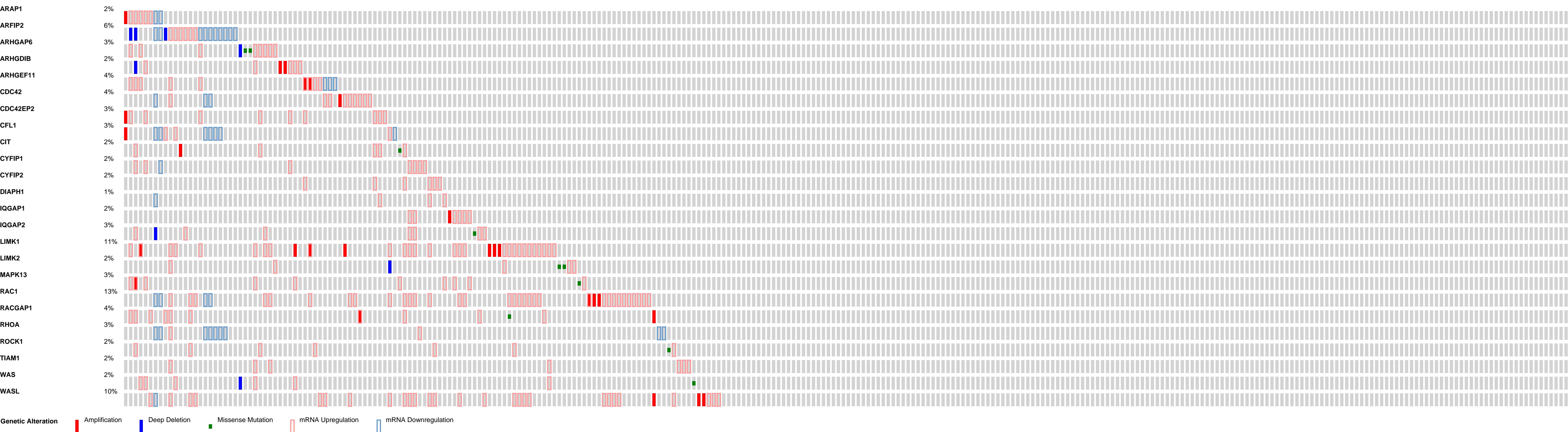
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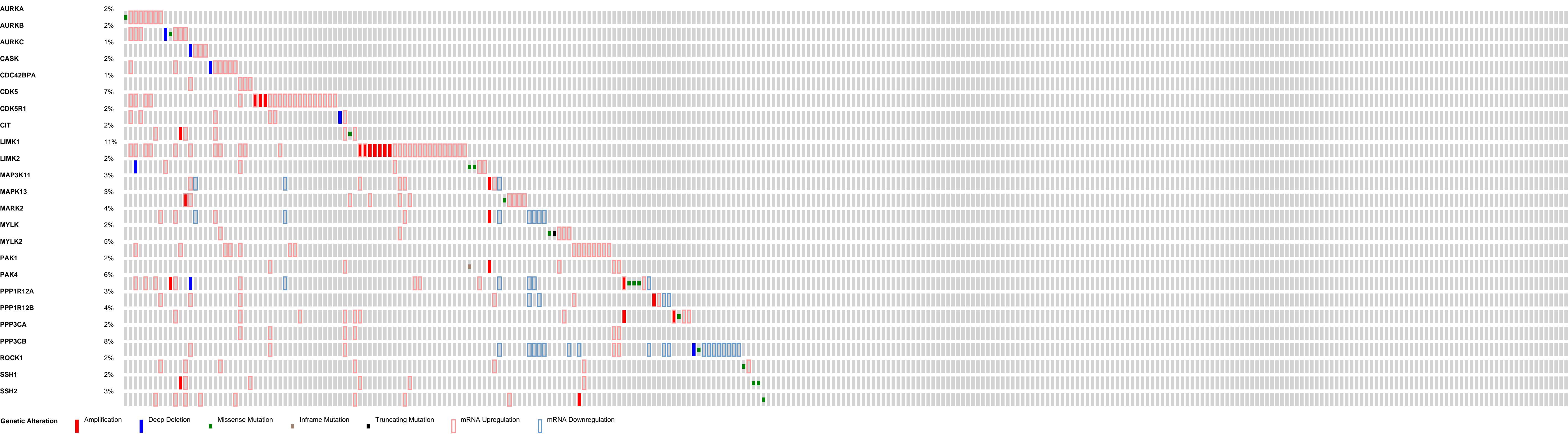


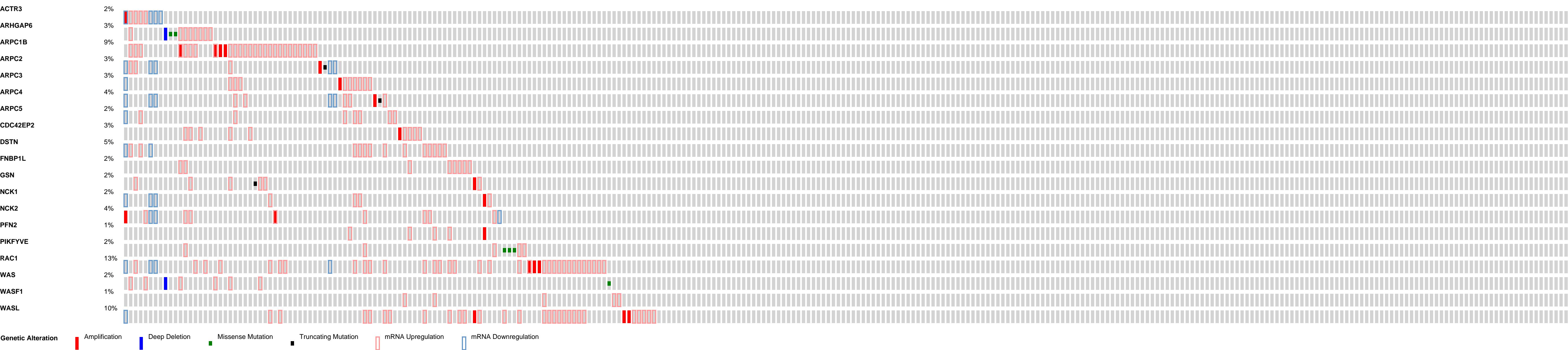


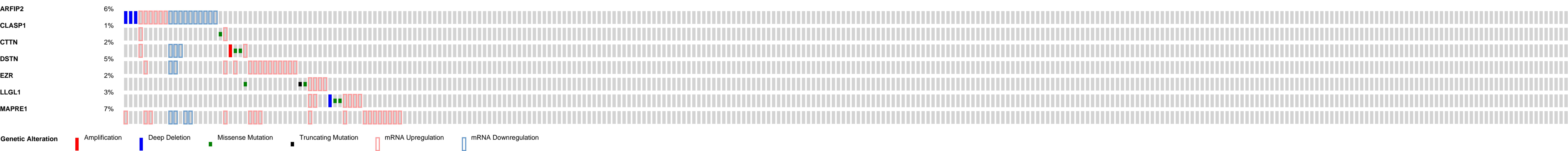


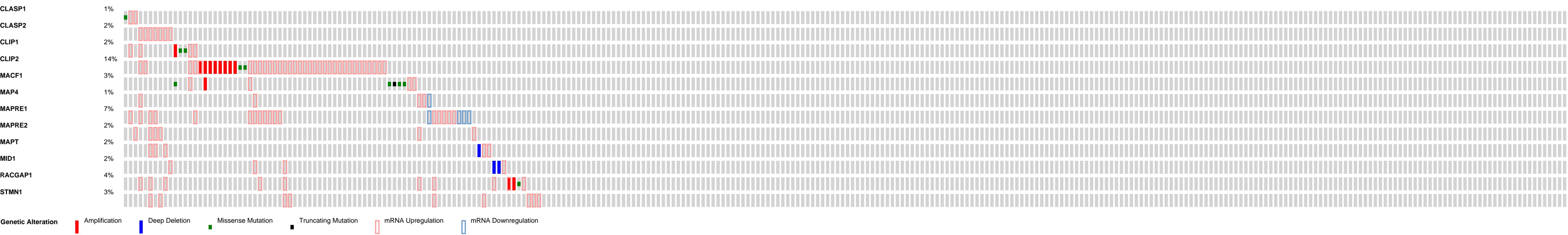


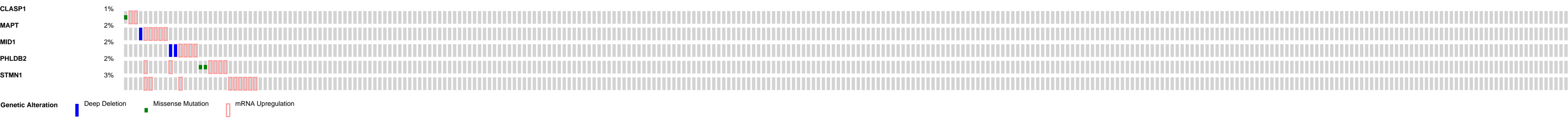


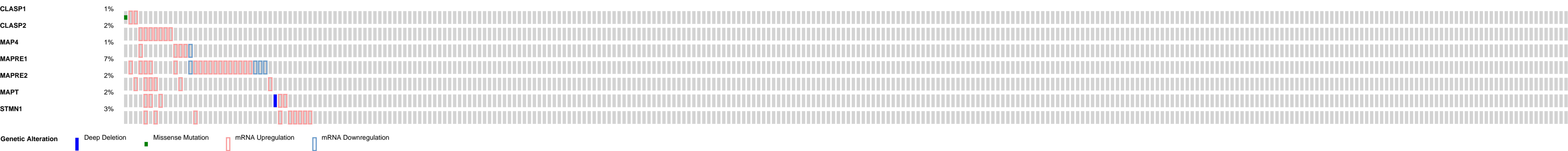


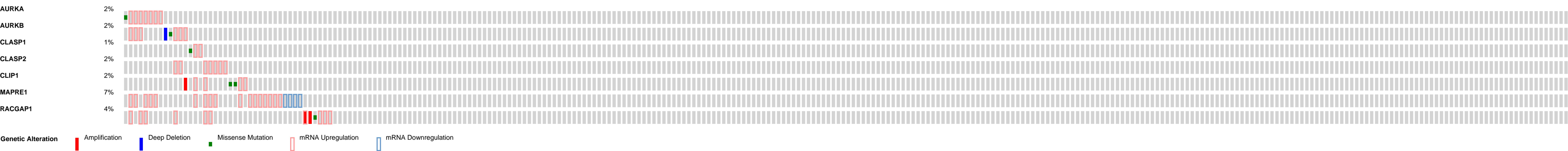


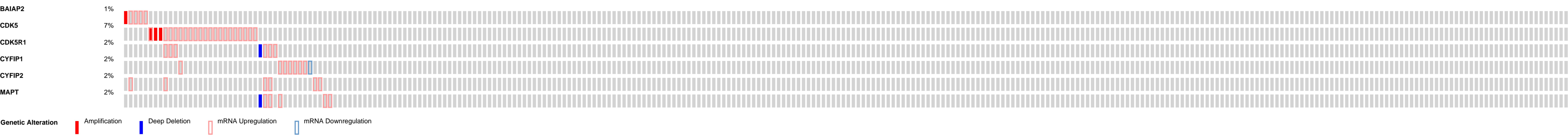




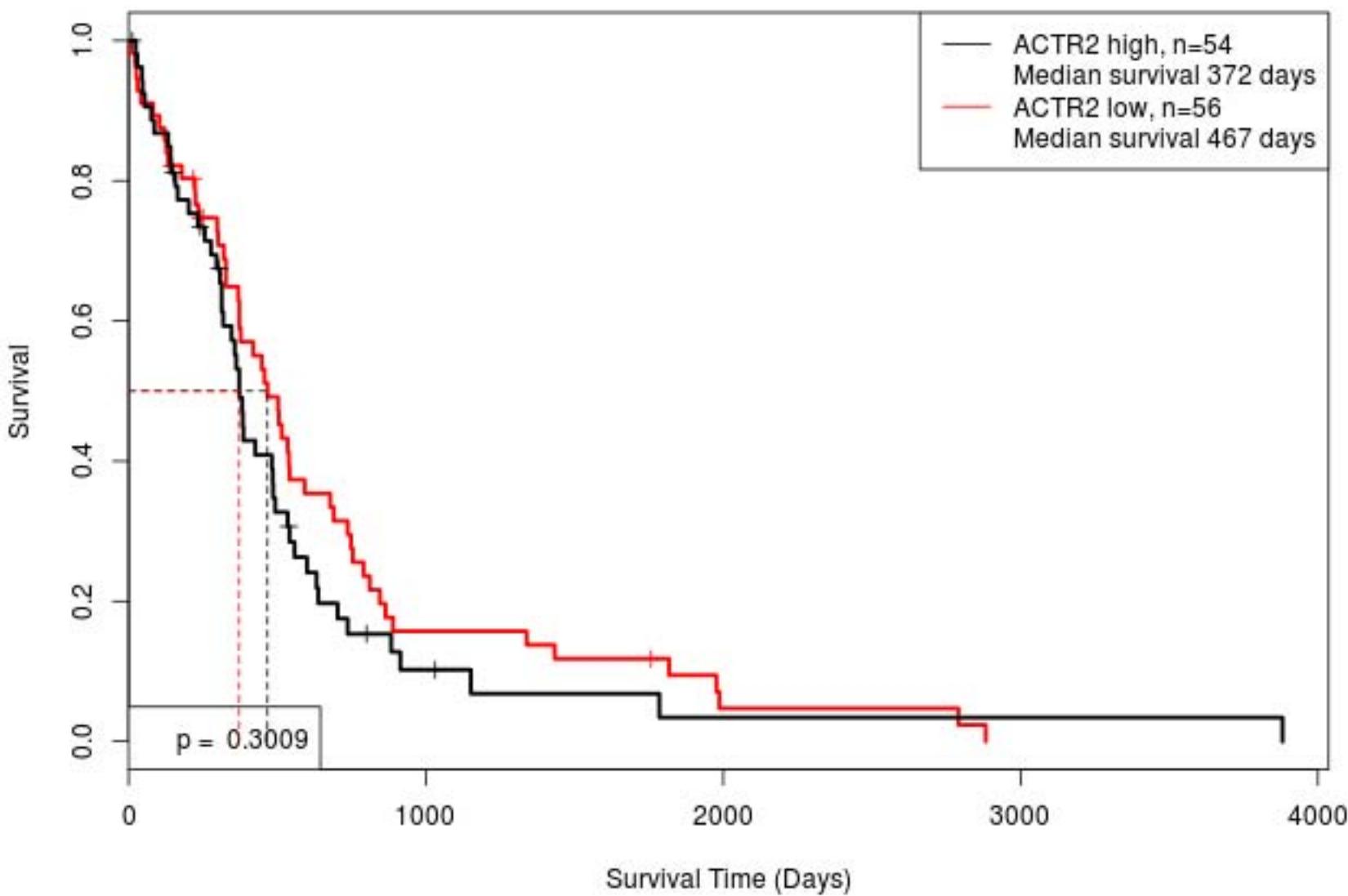


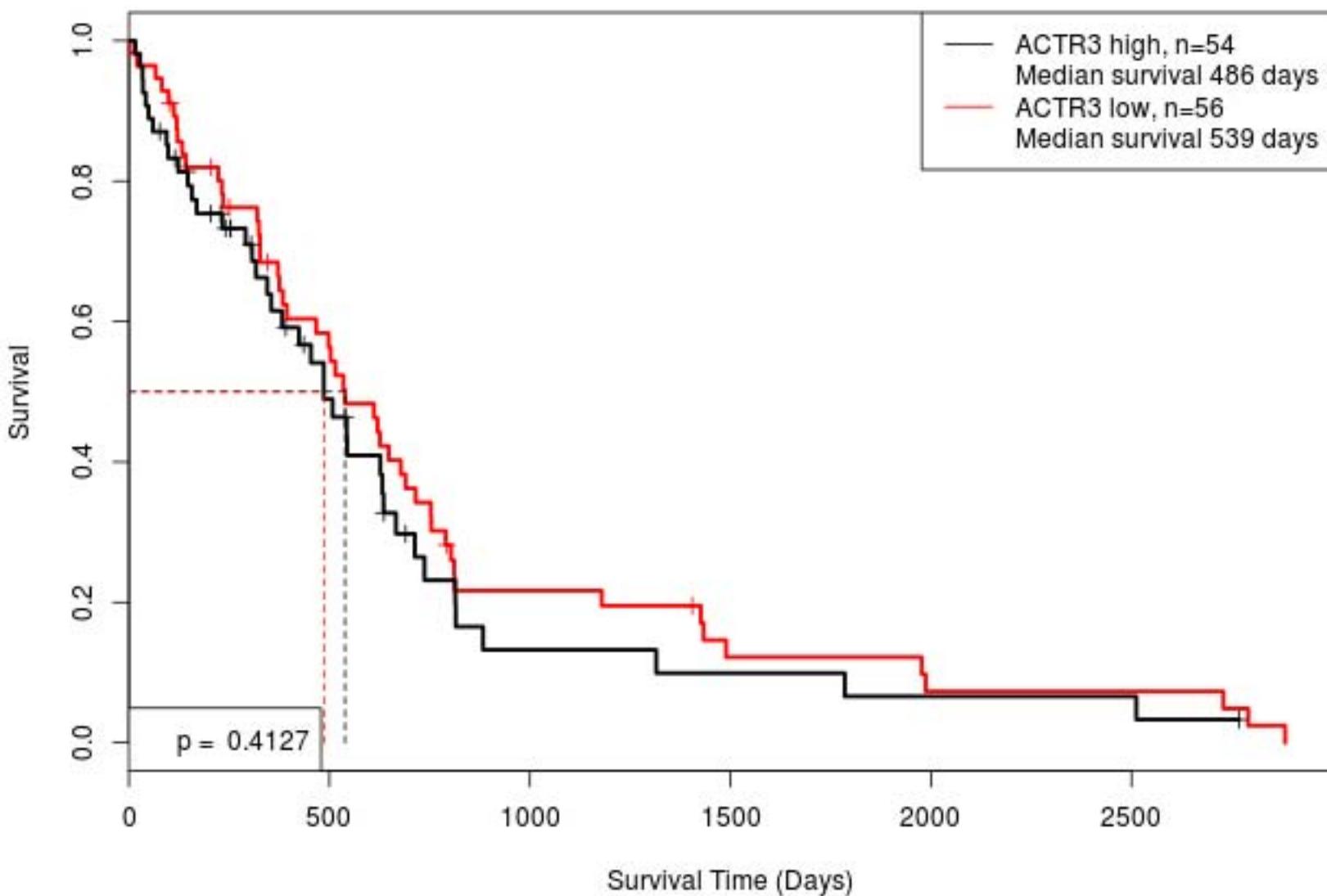


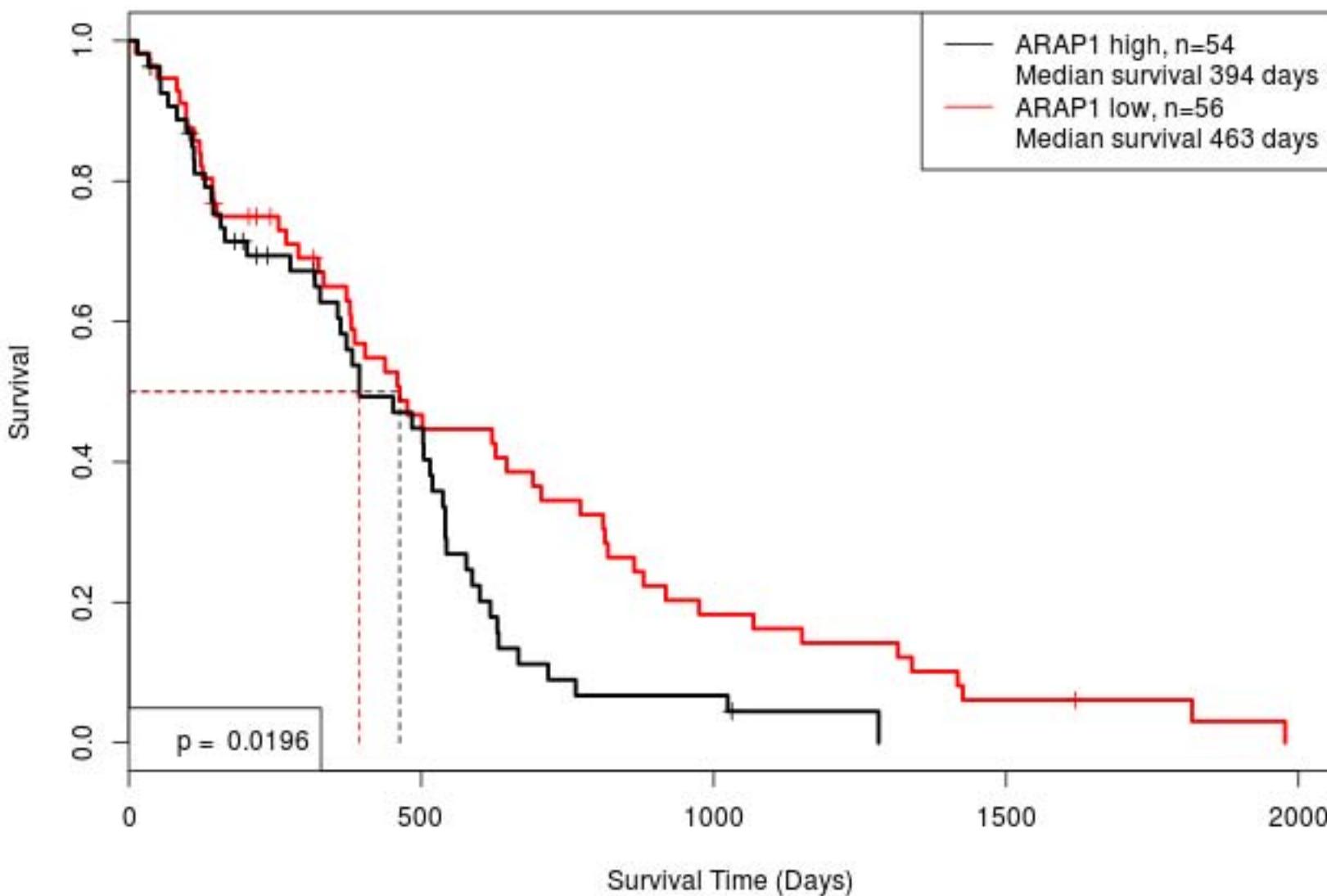


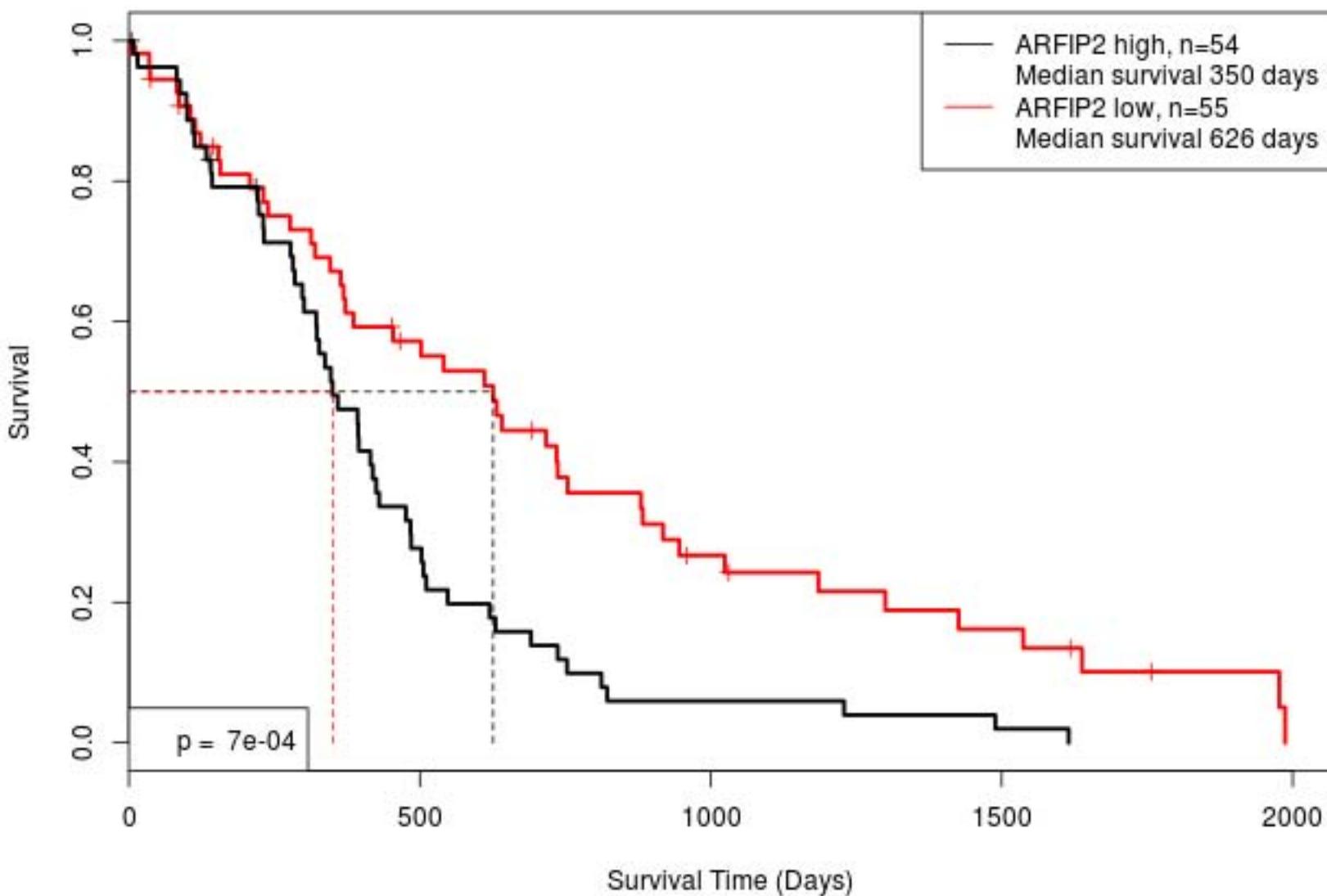


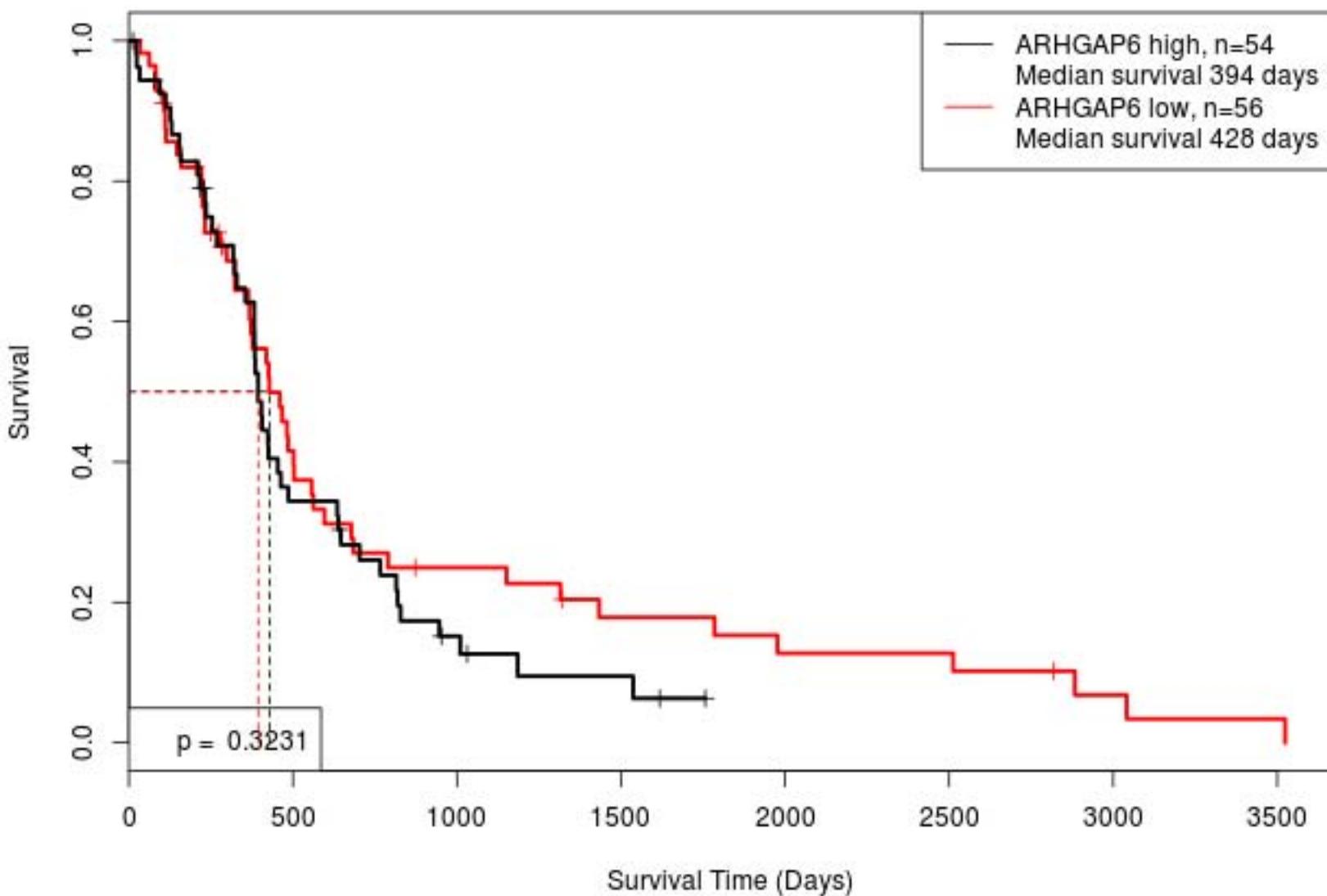
**Supplementary Figure 2.** Survival plots of patients with high or low expression of cytoskeleton regulators analyzed in this study.

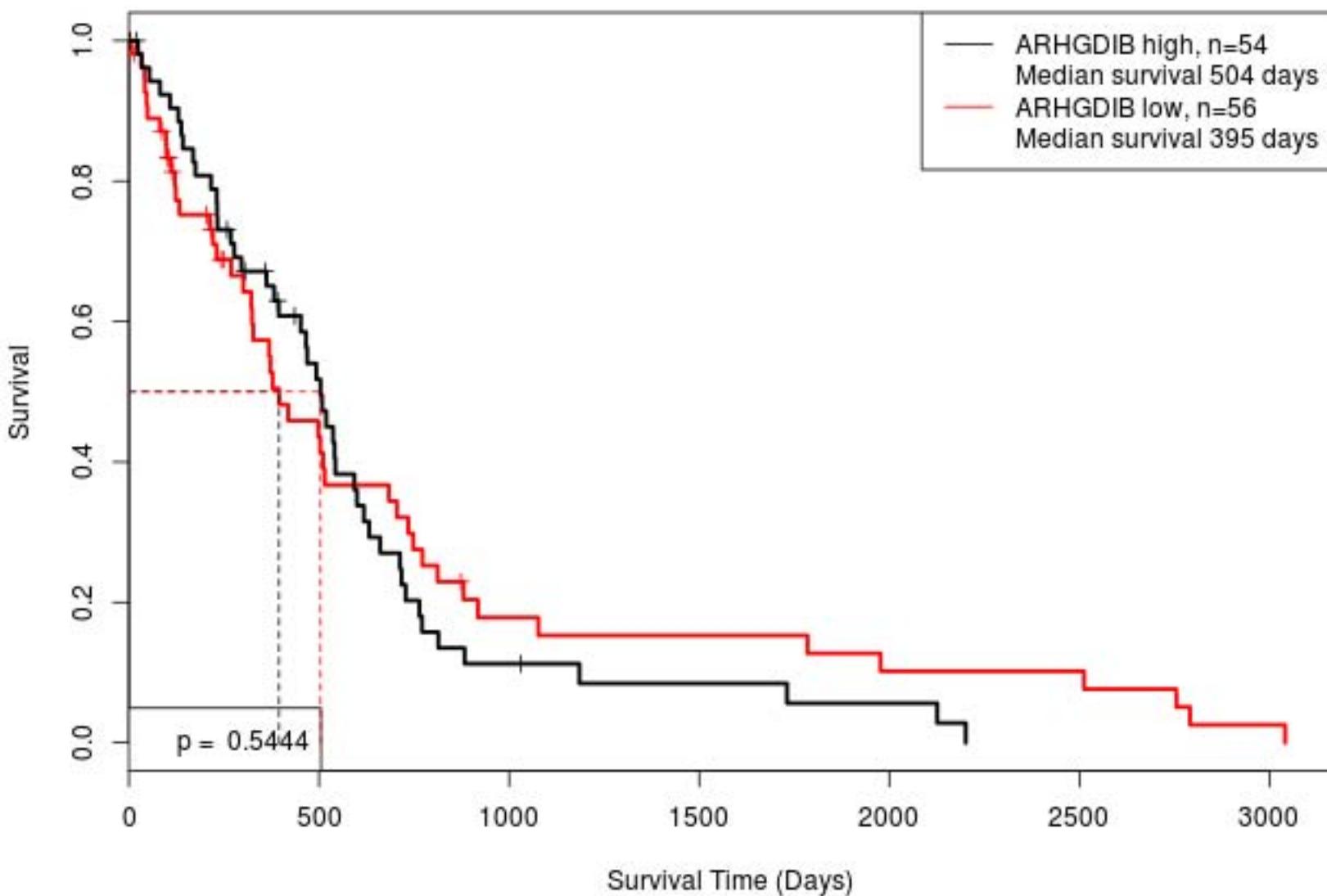


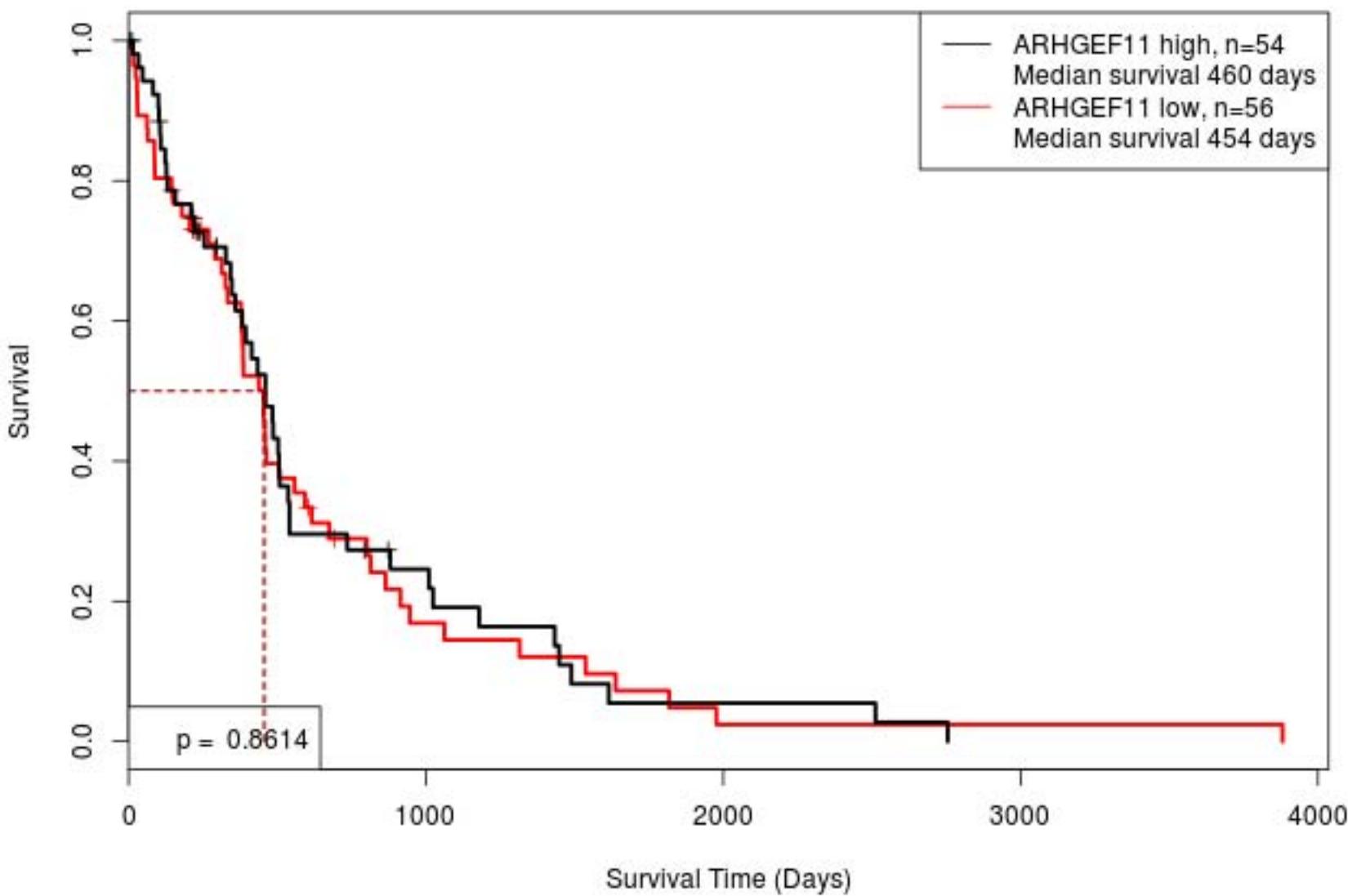


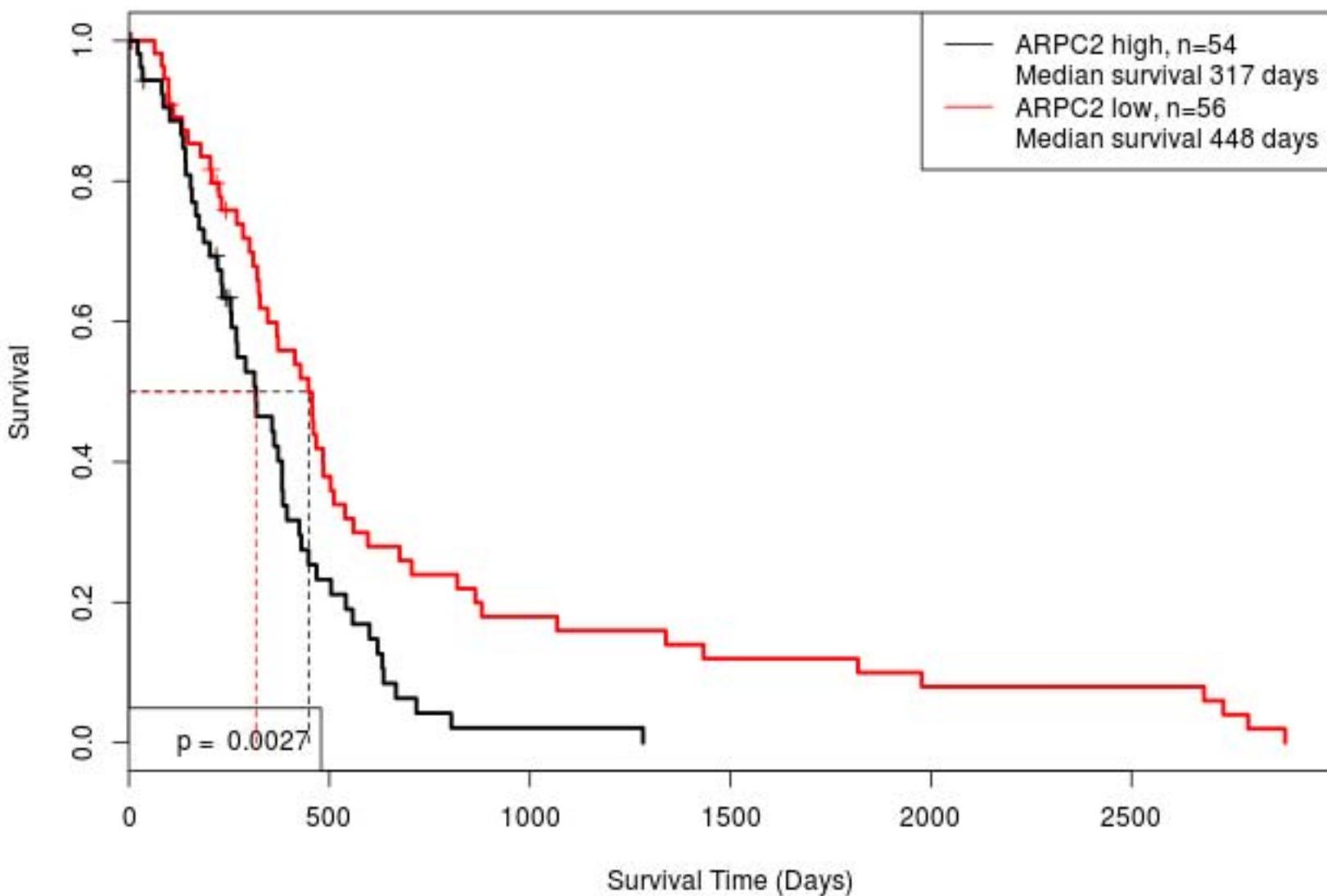


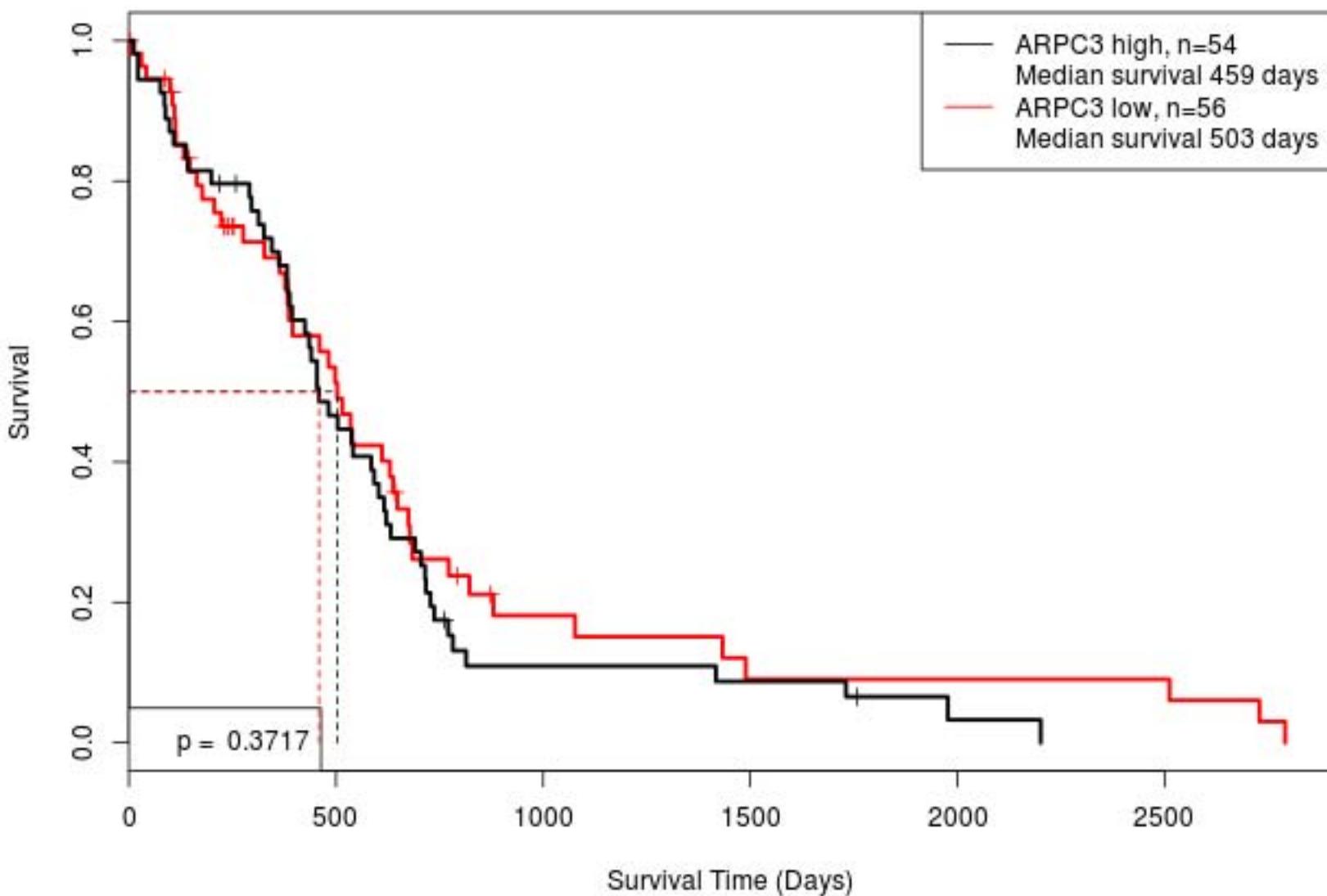


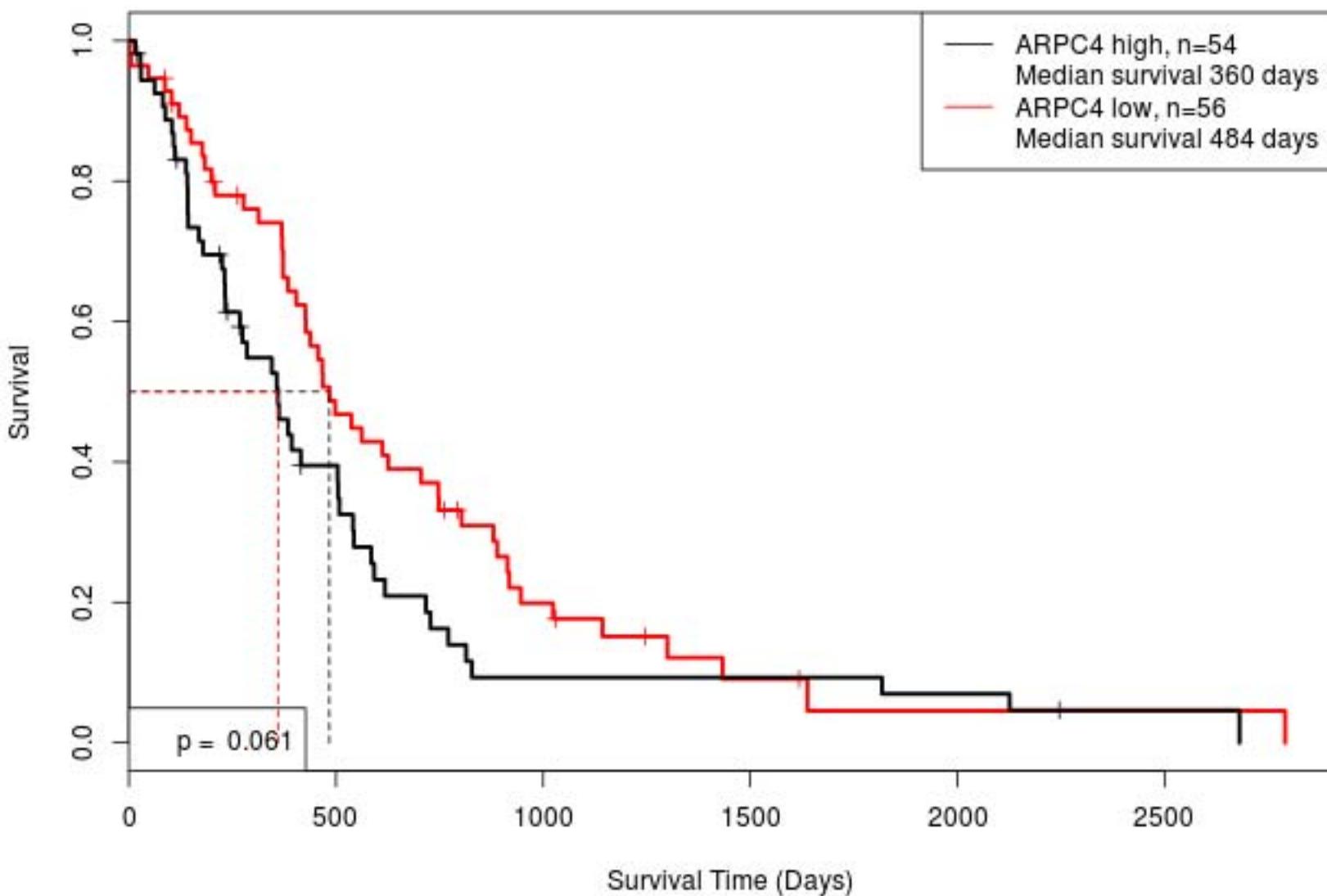


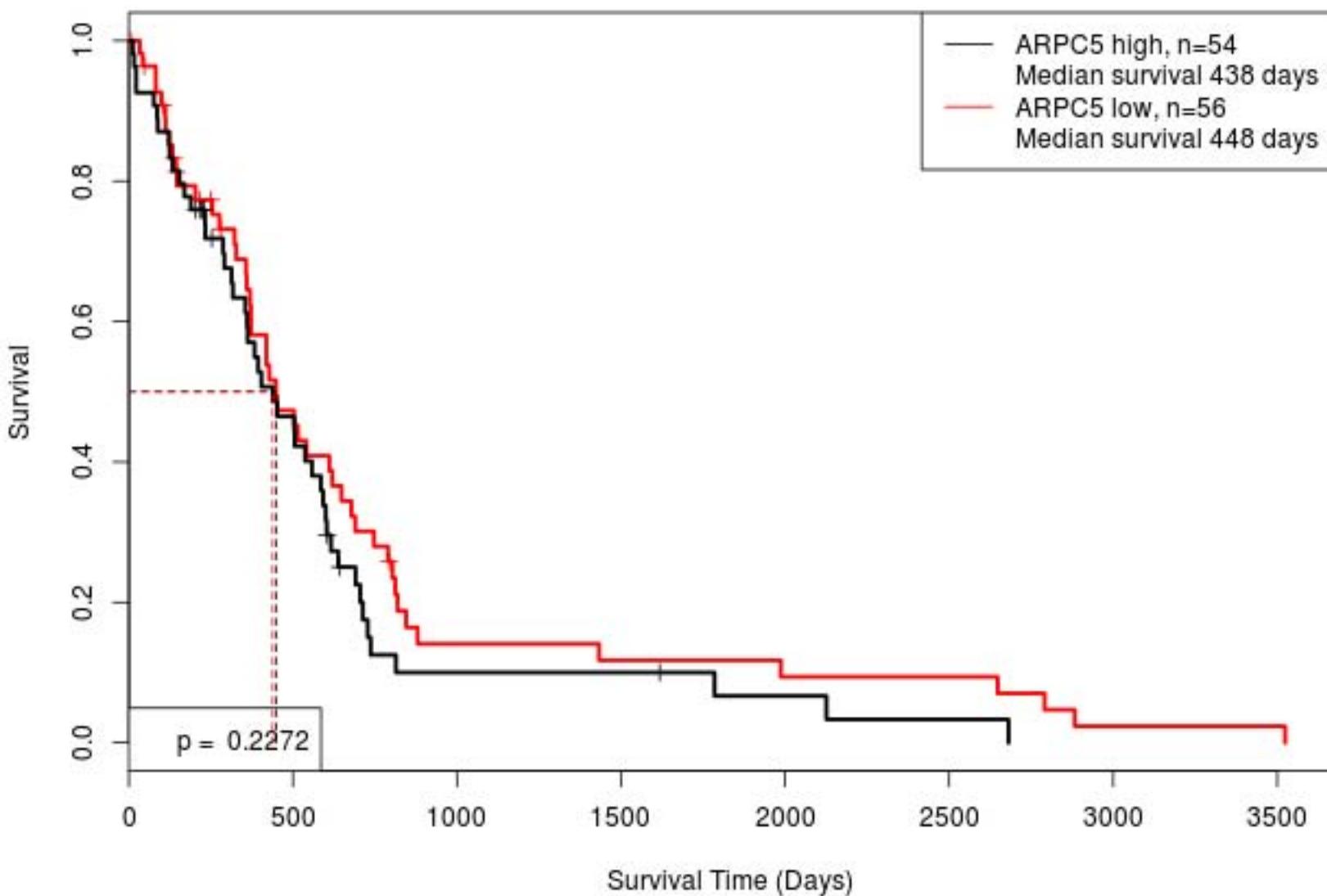


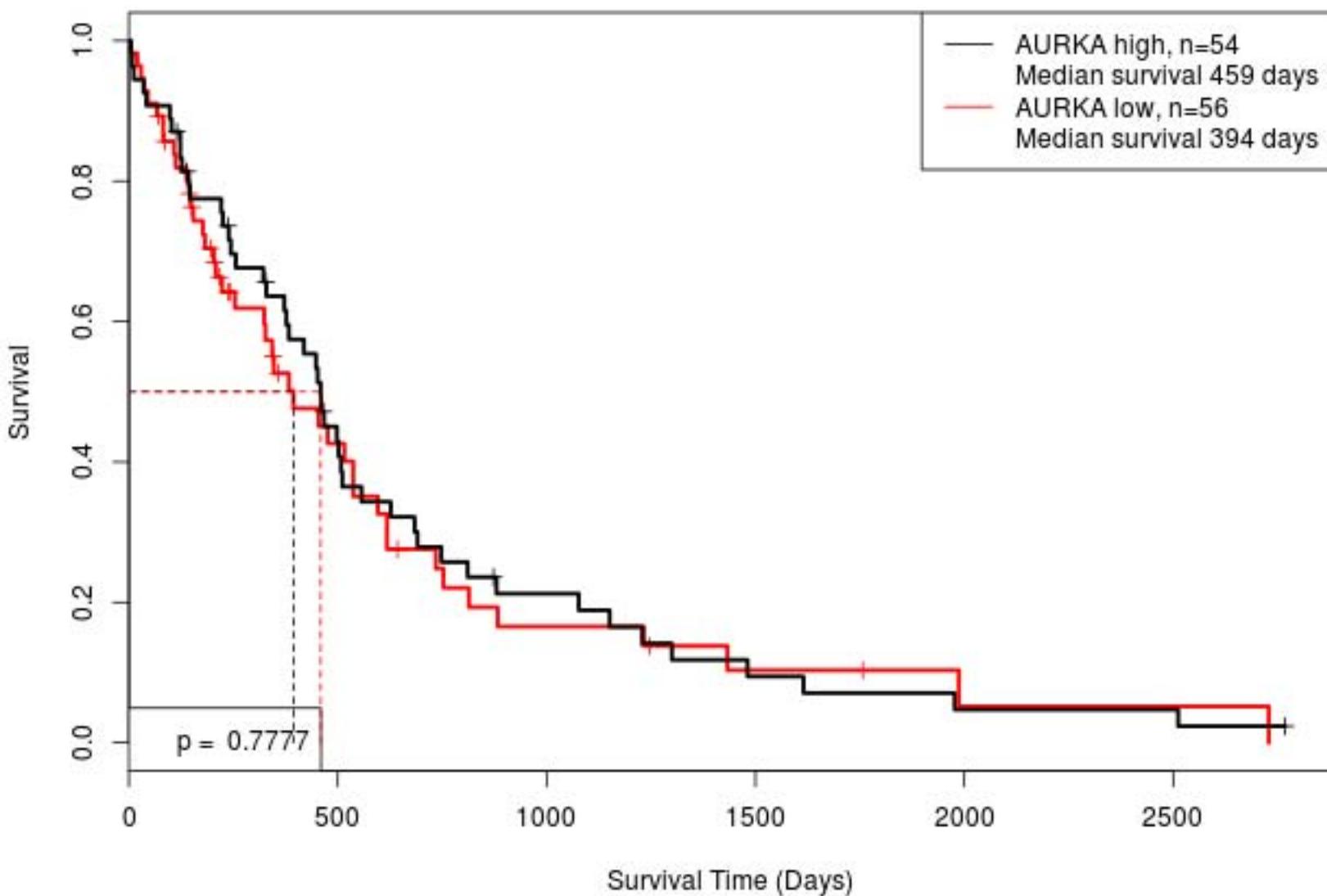


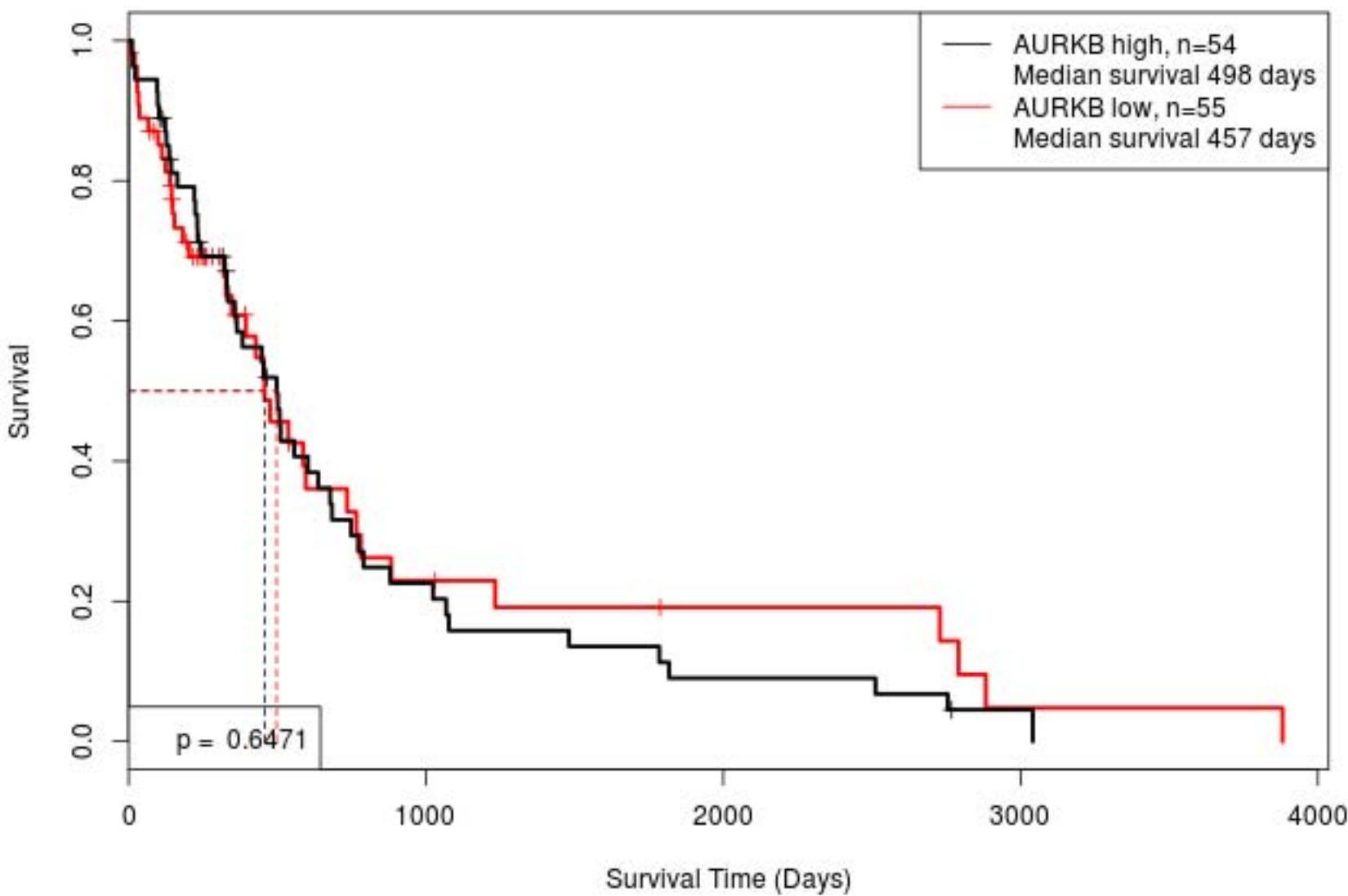


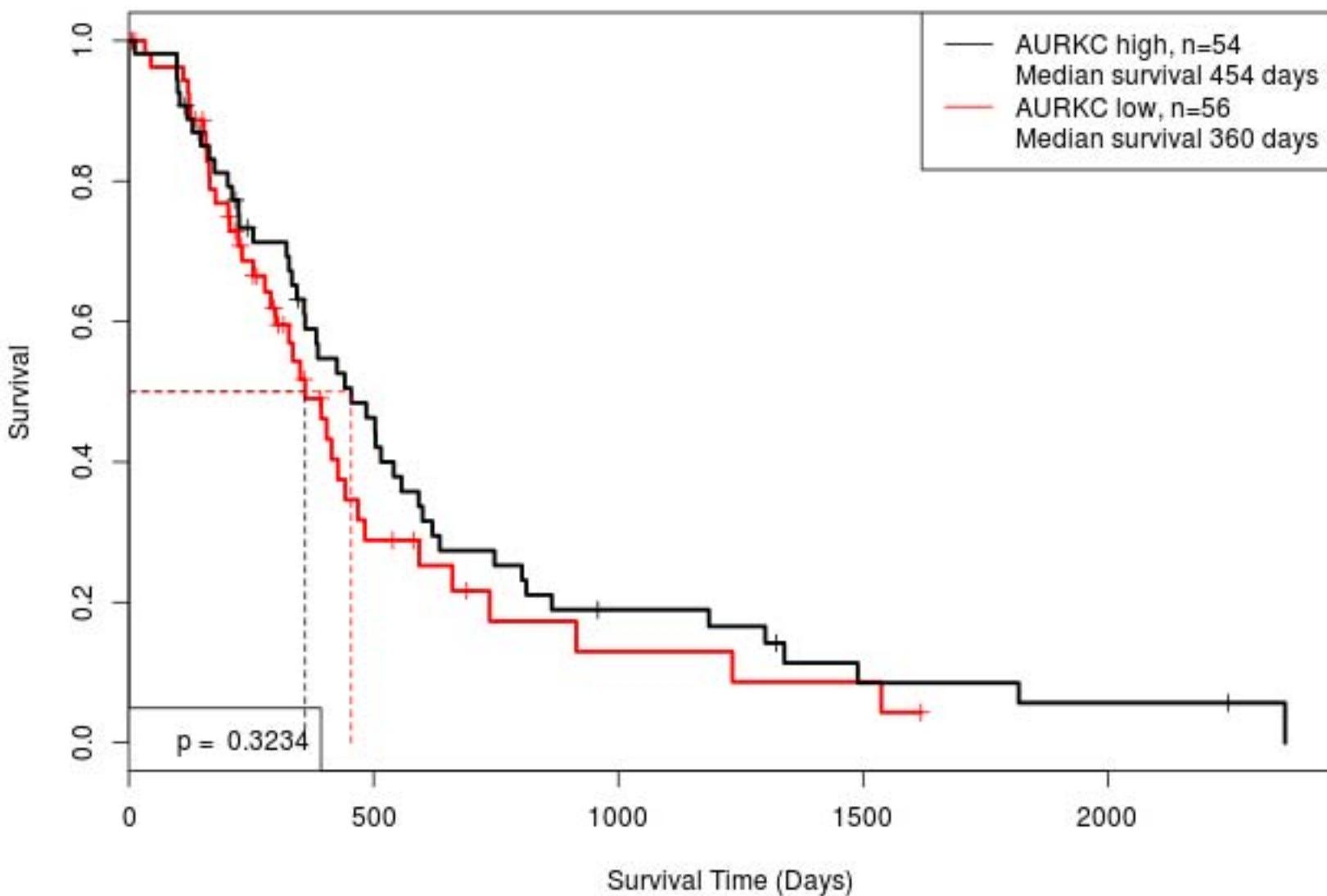


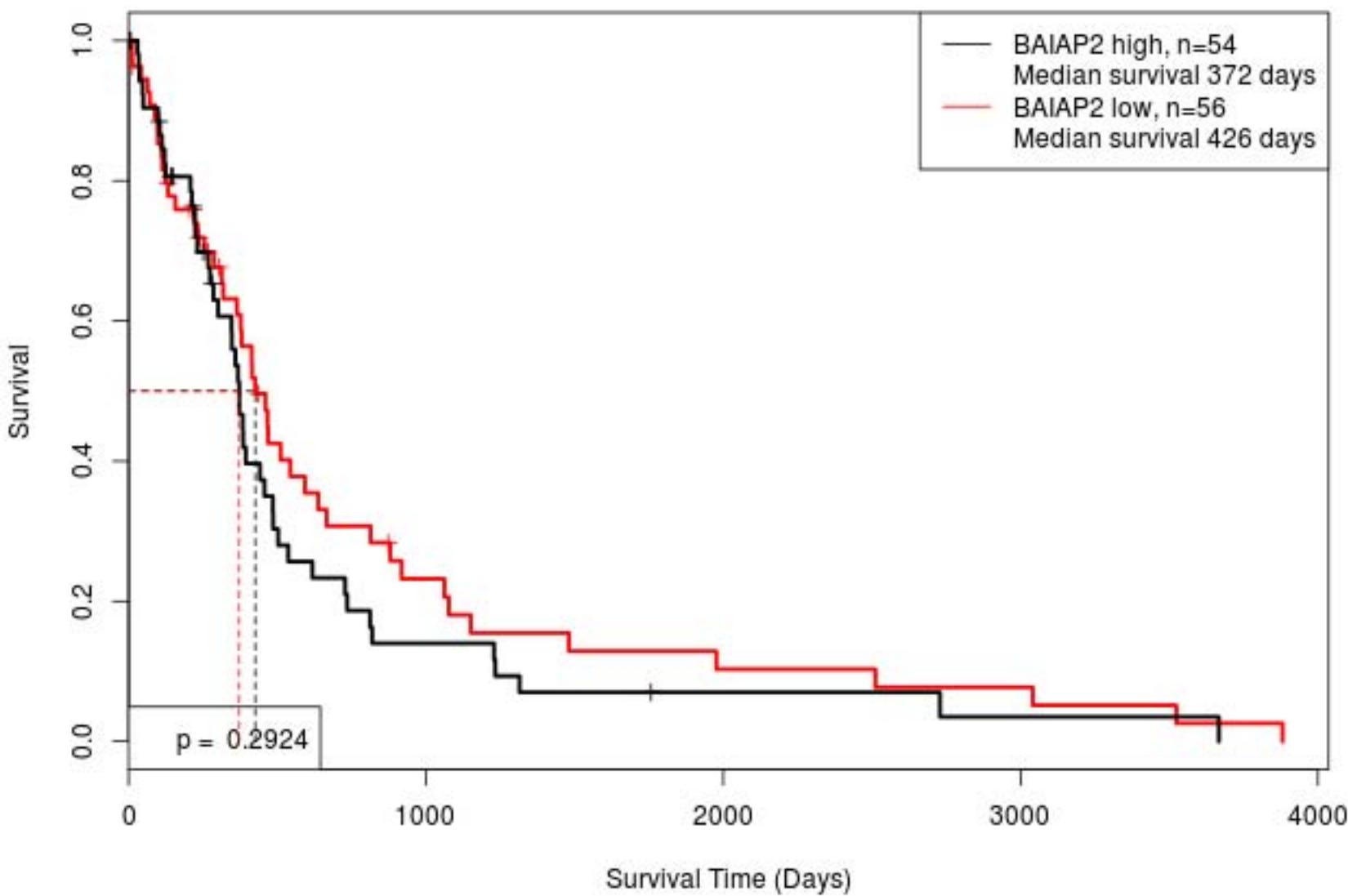


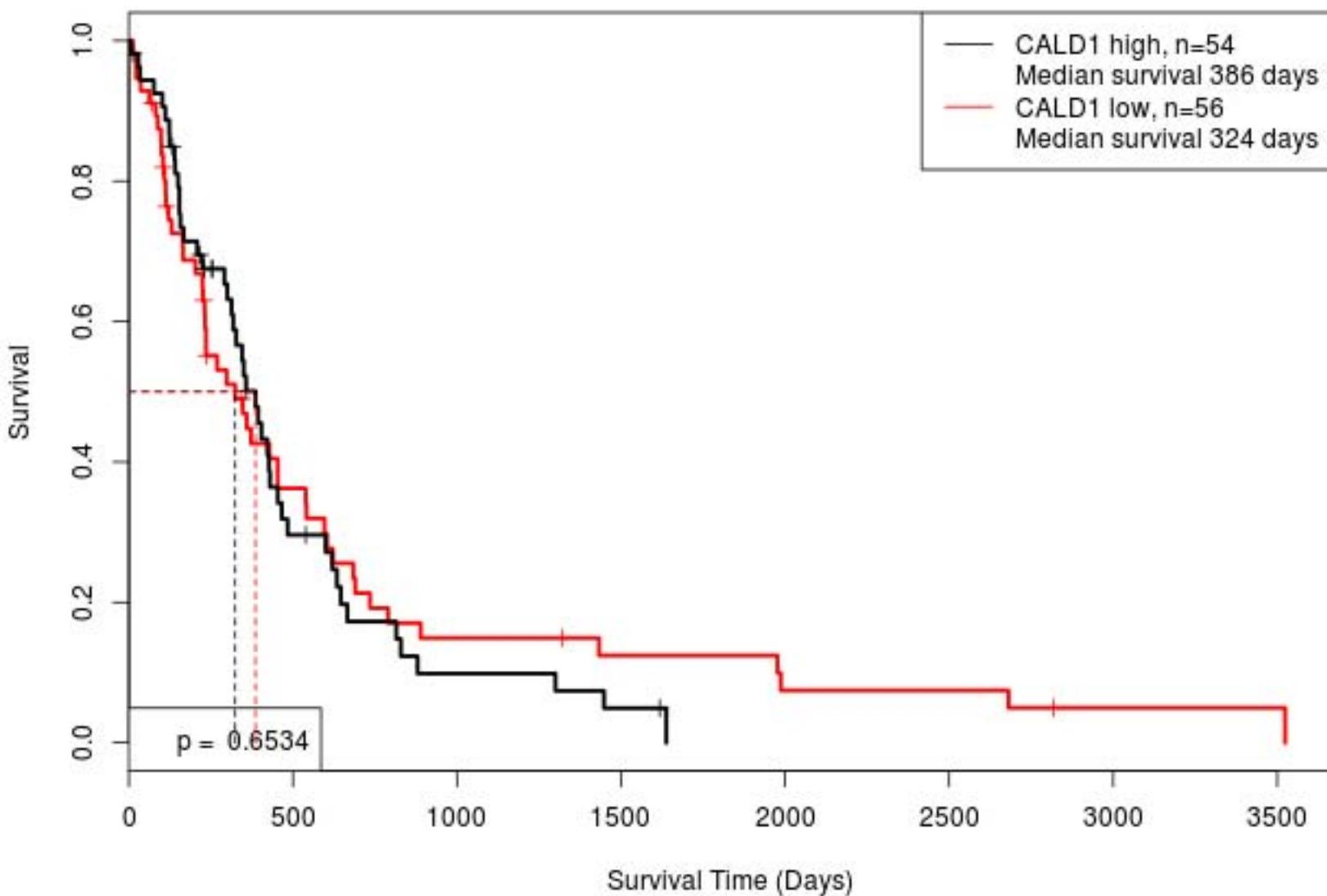


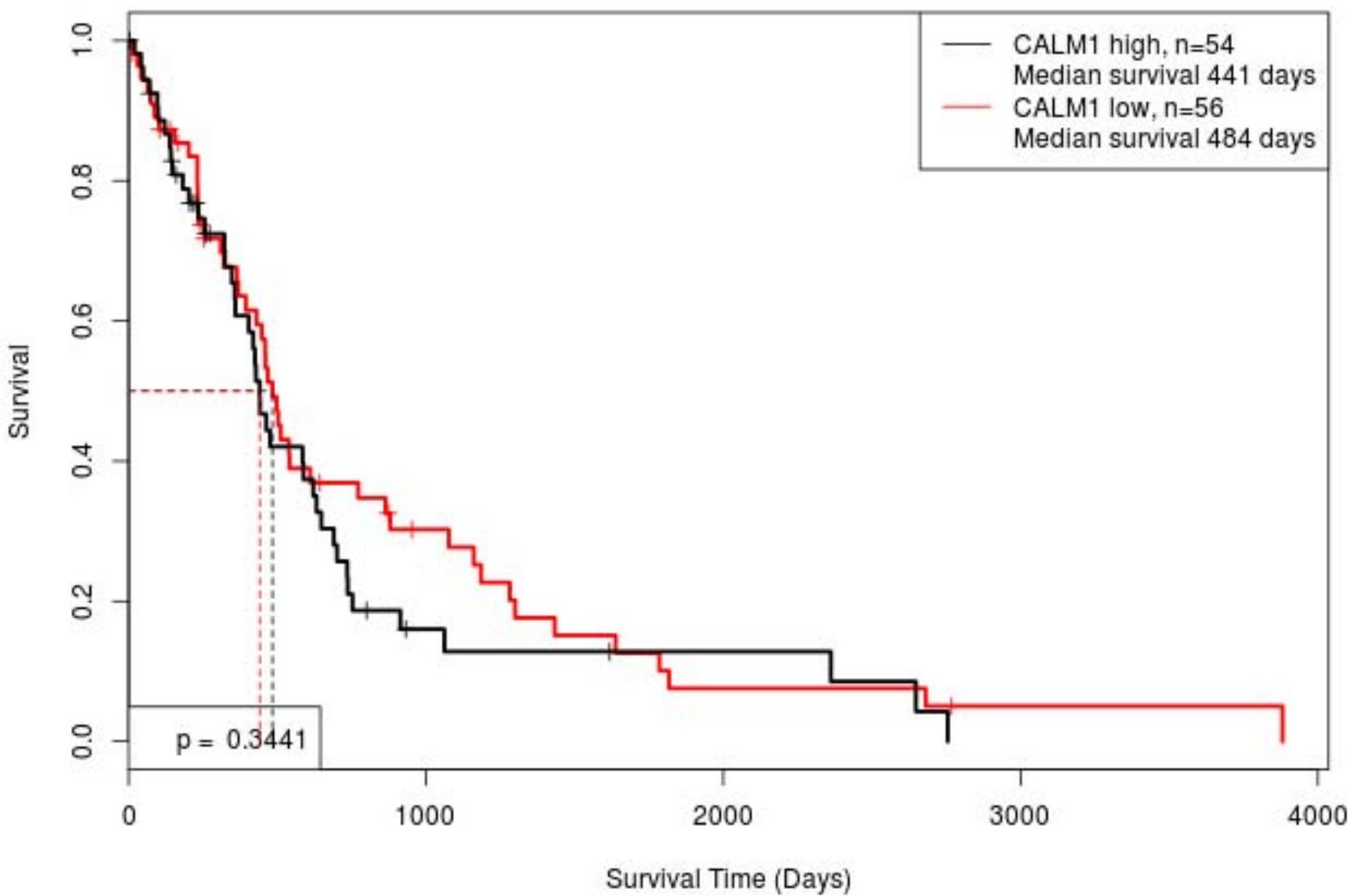


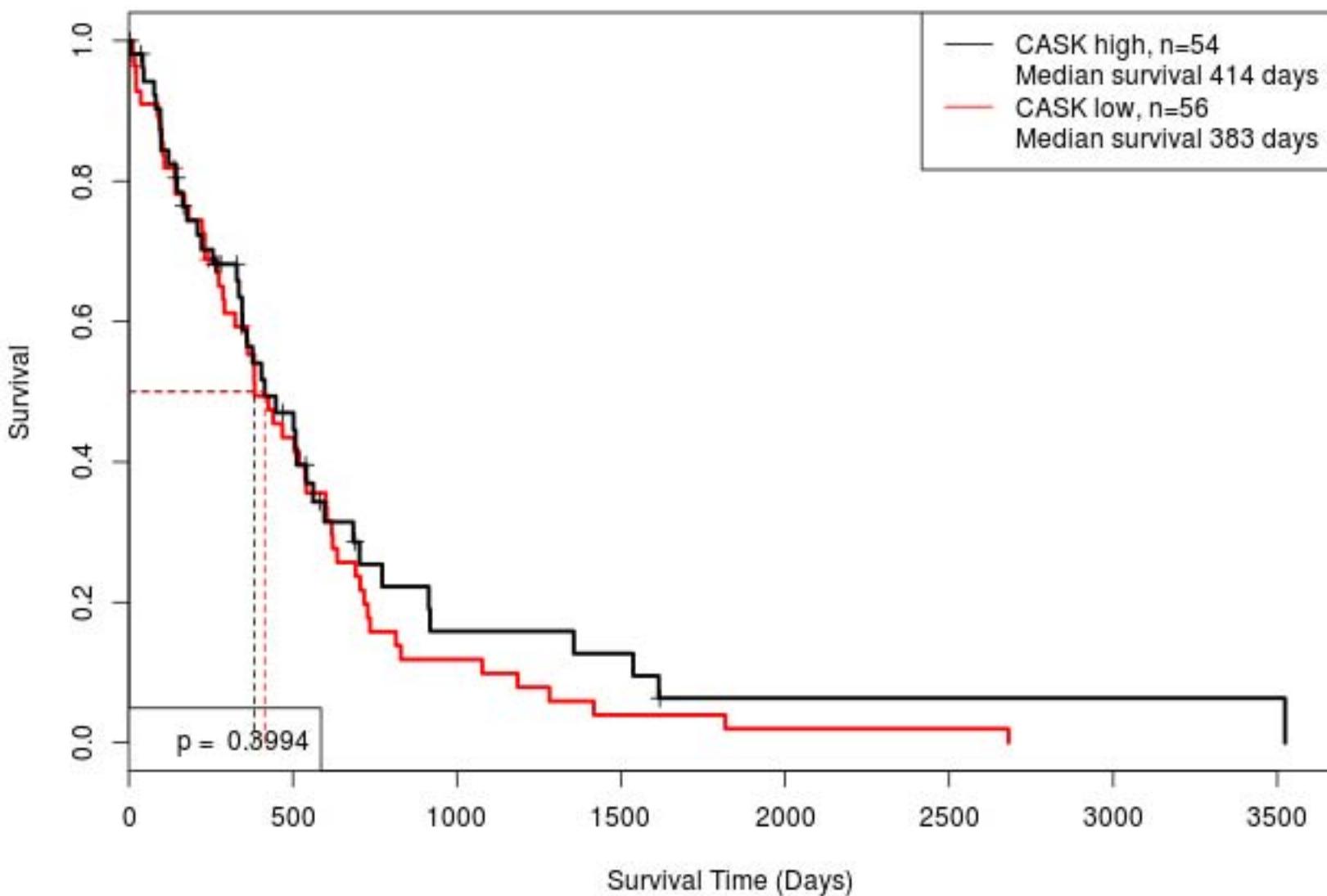


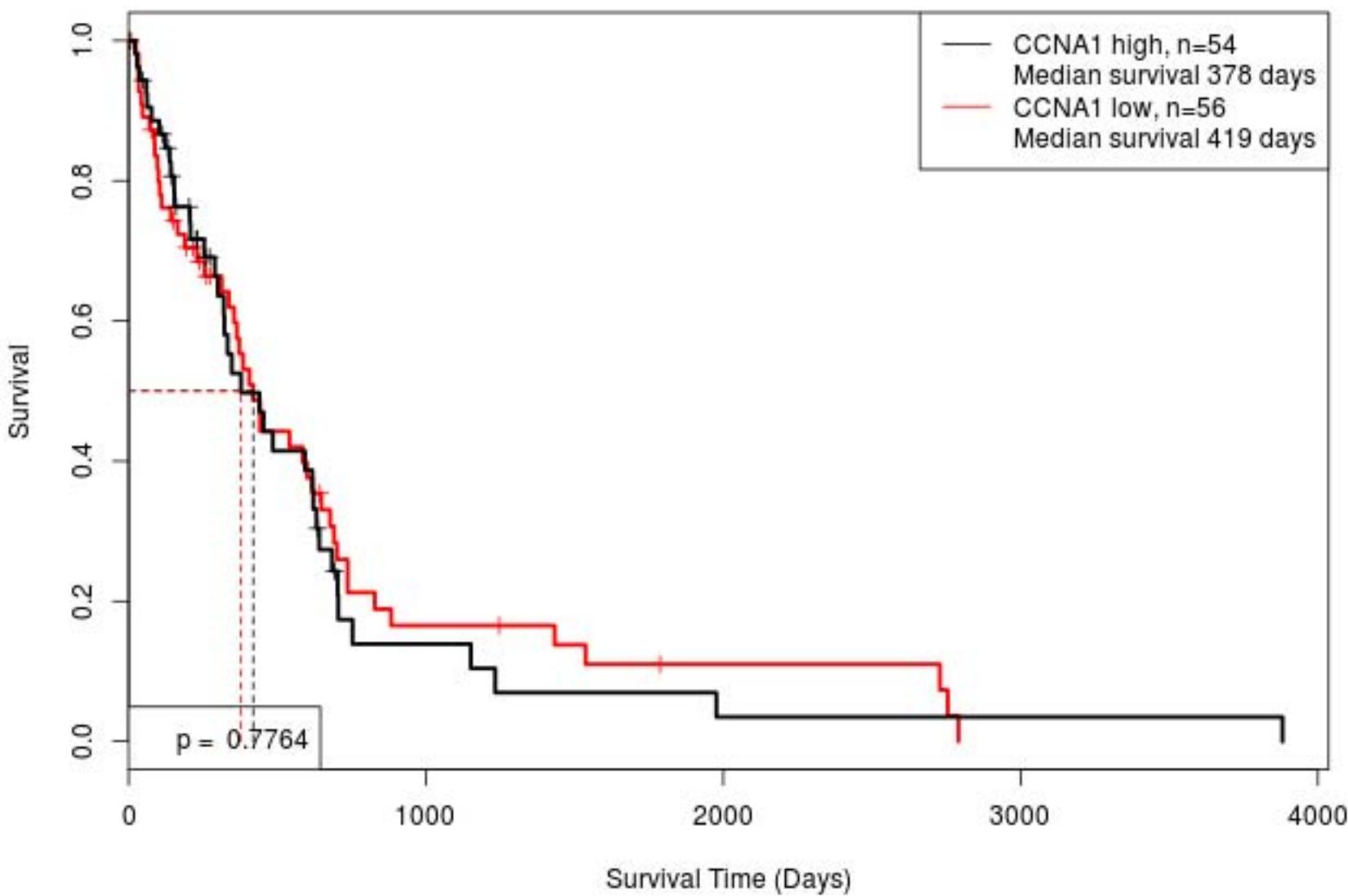


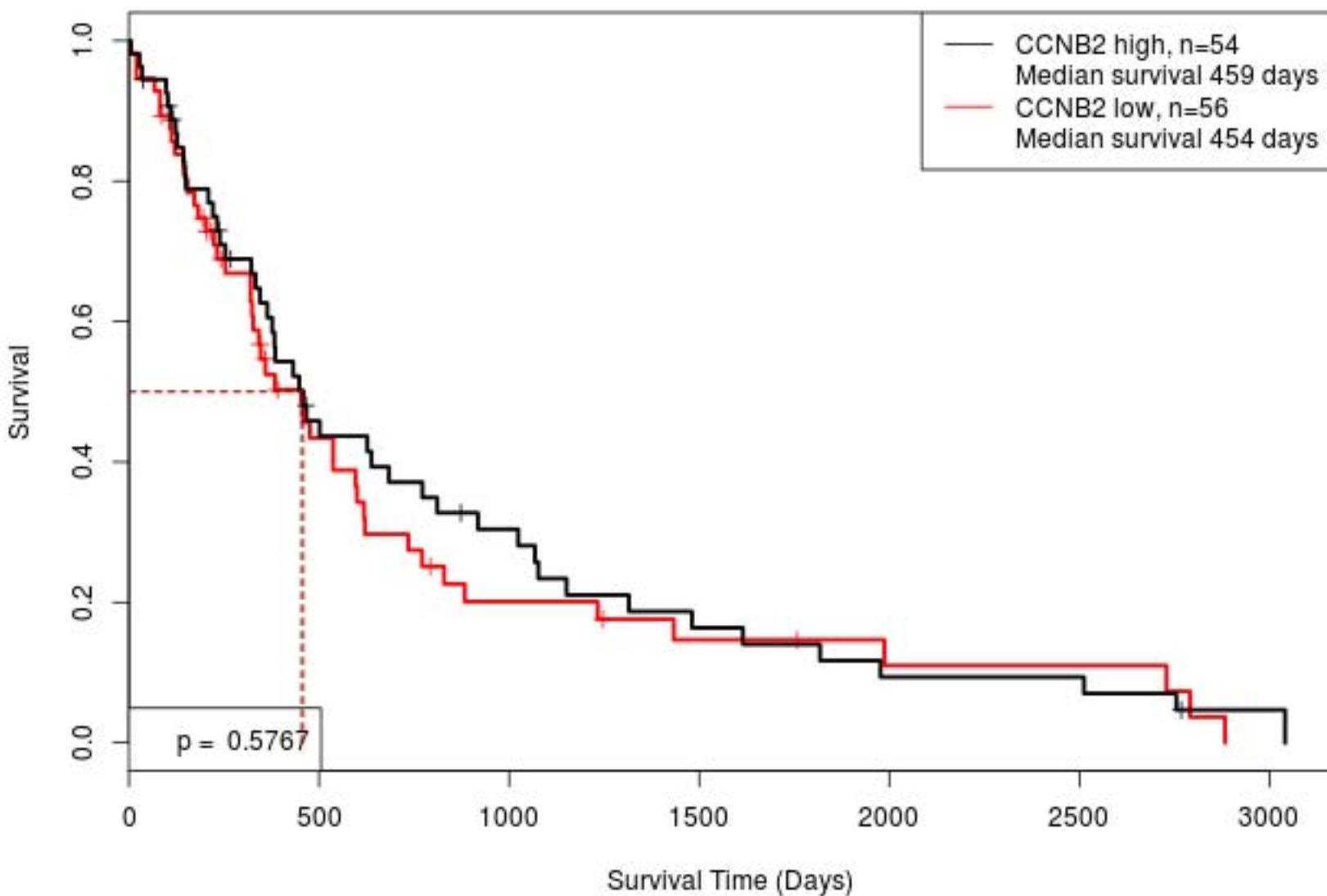


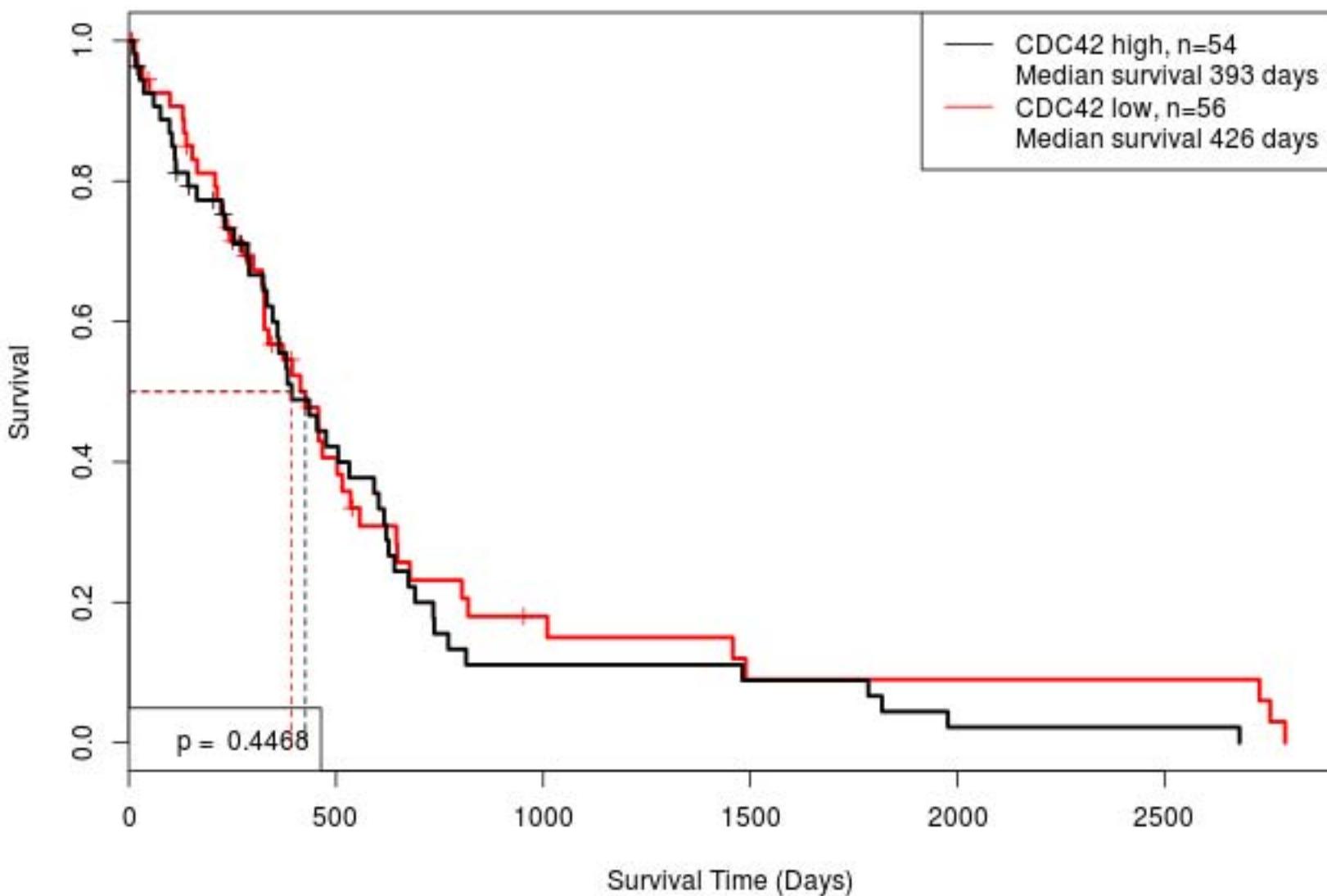


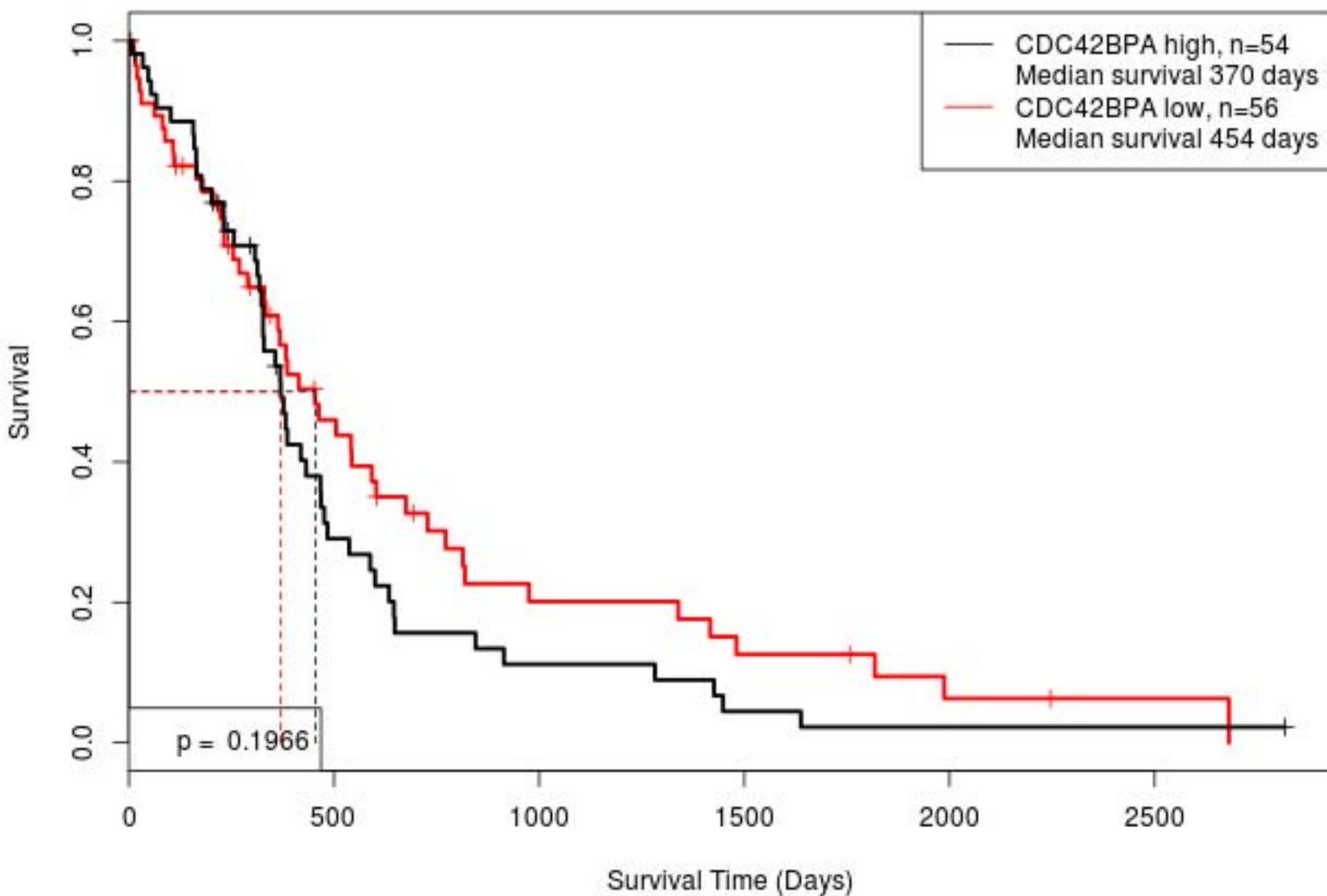


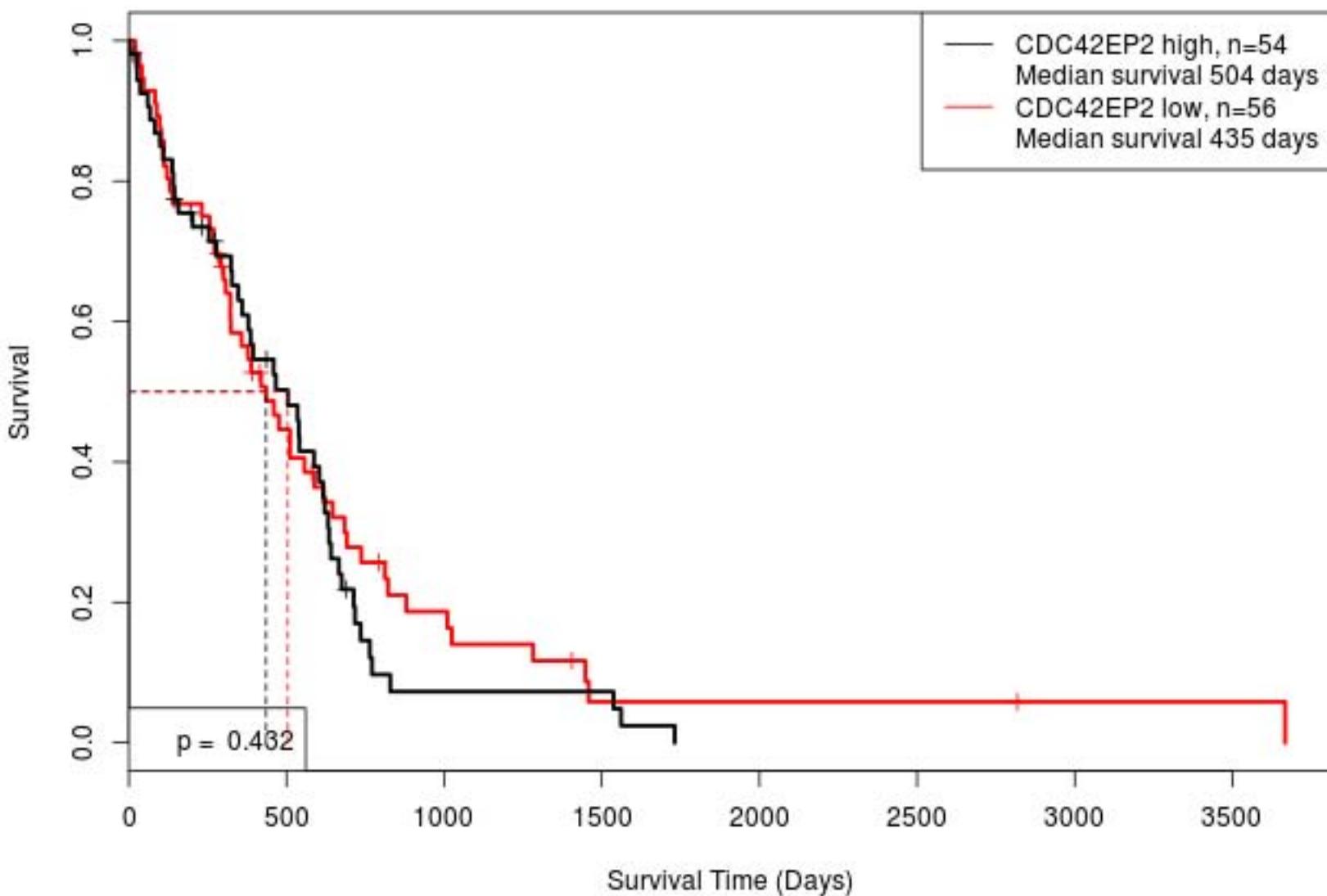


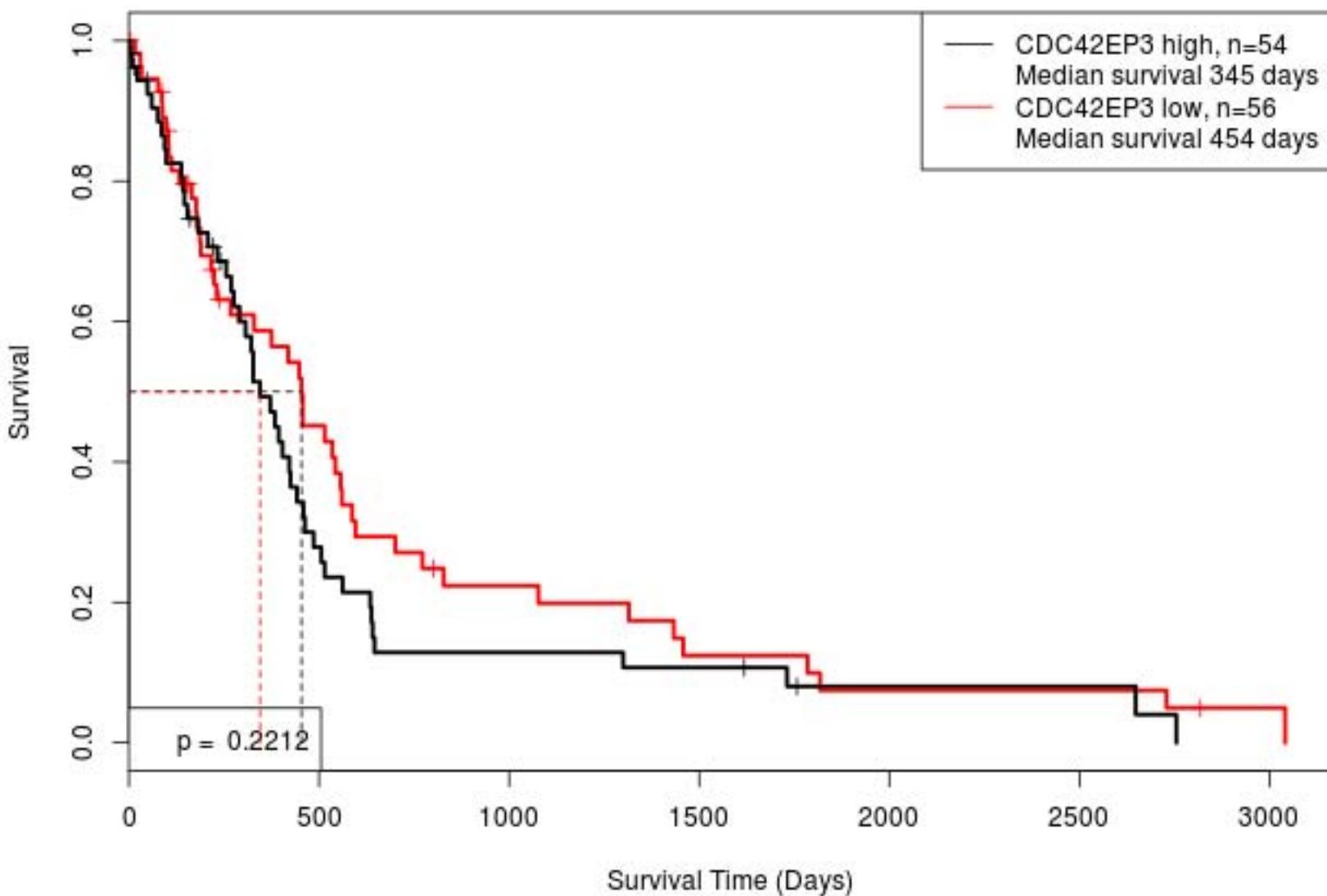


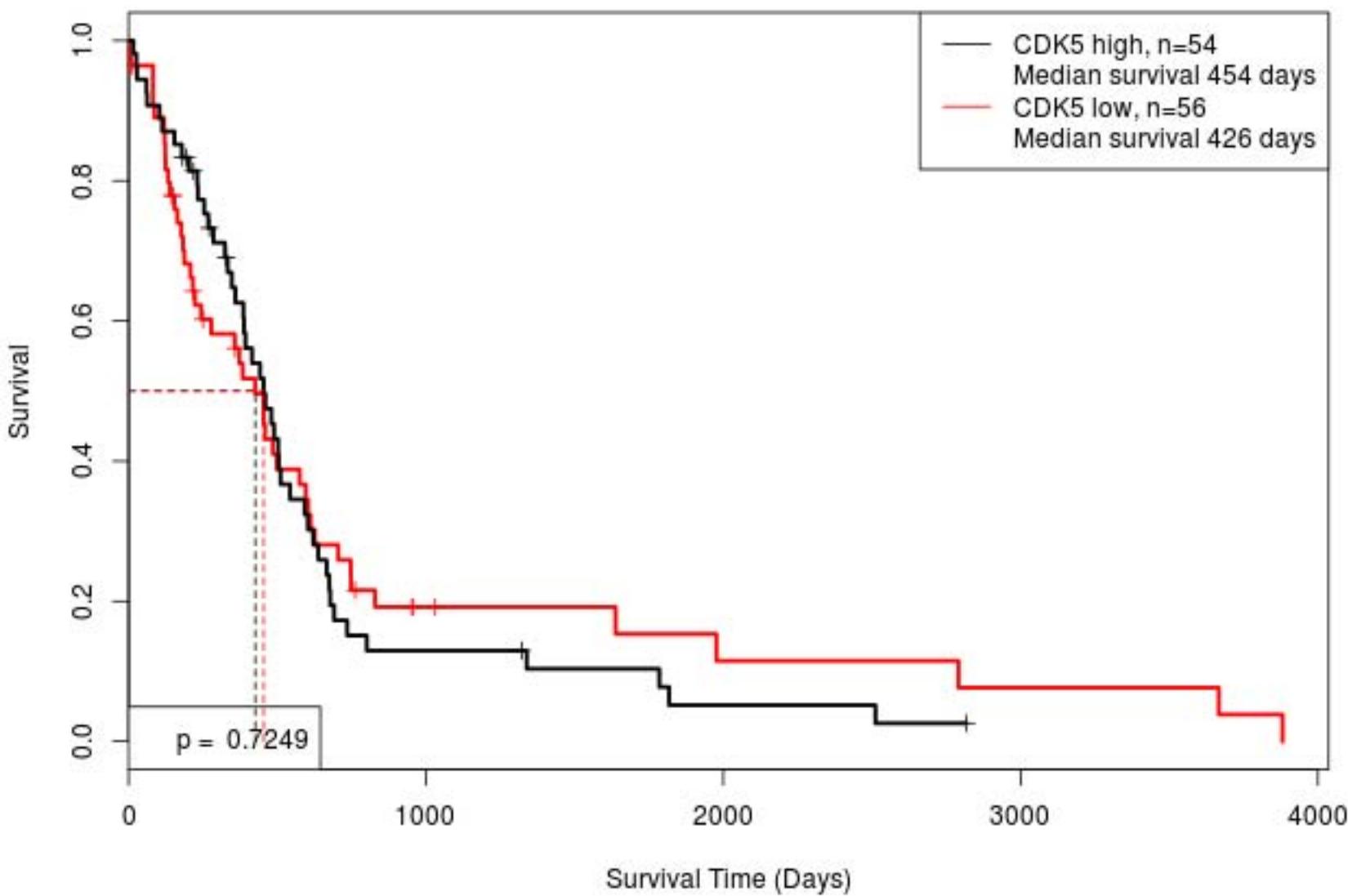


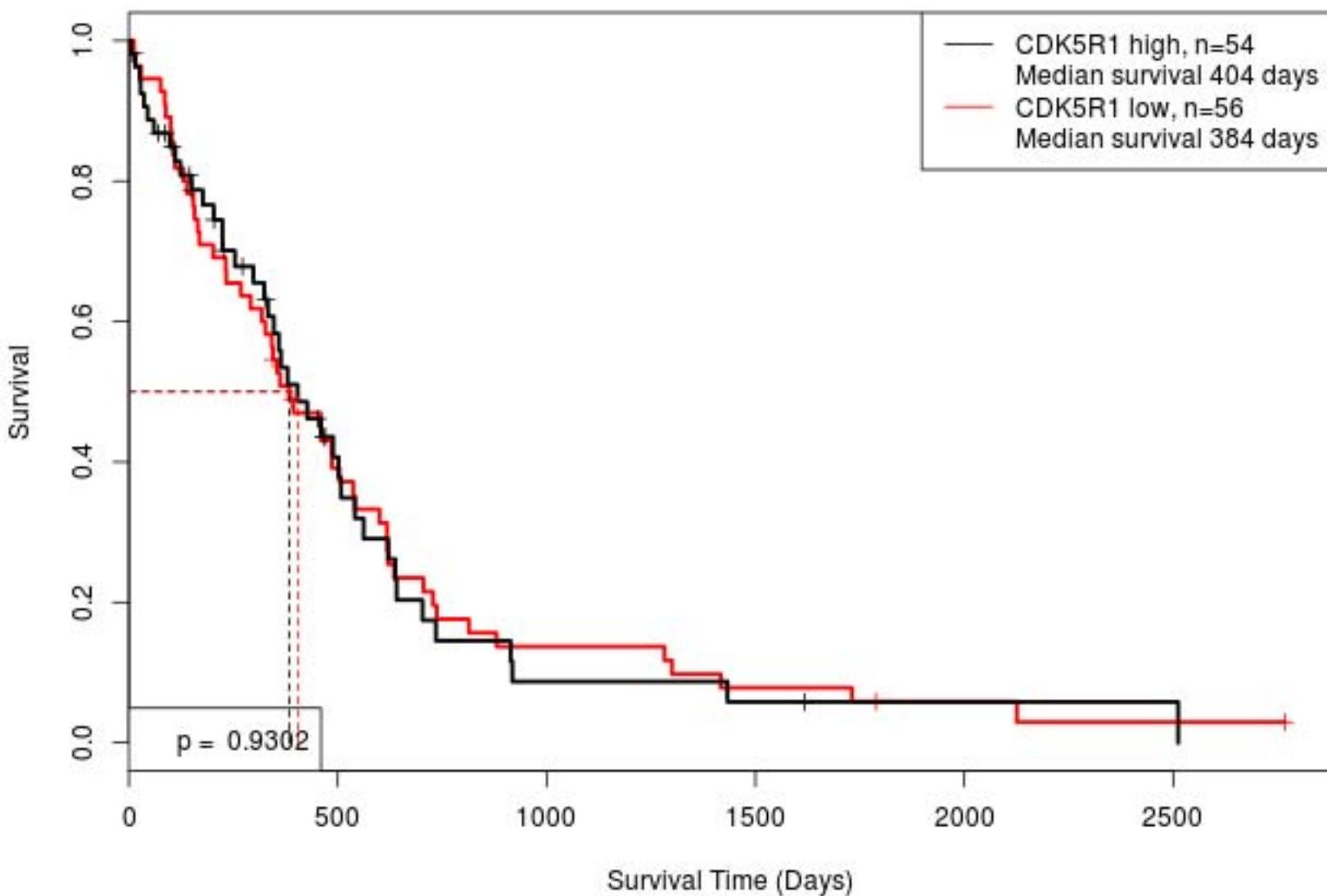


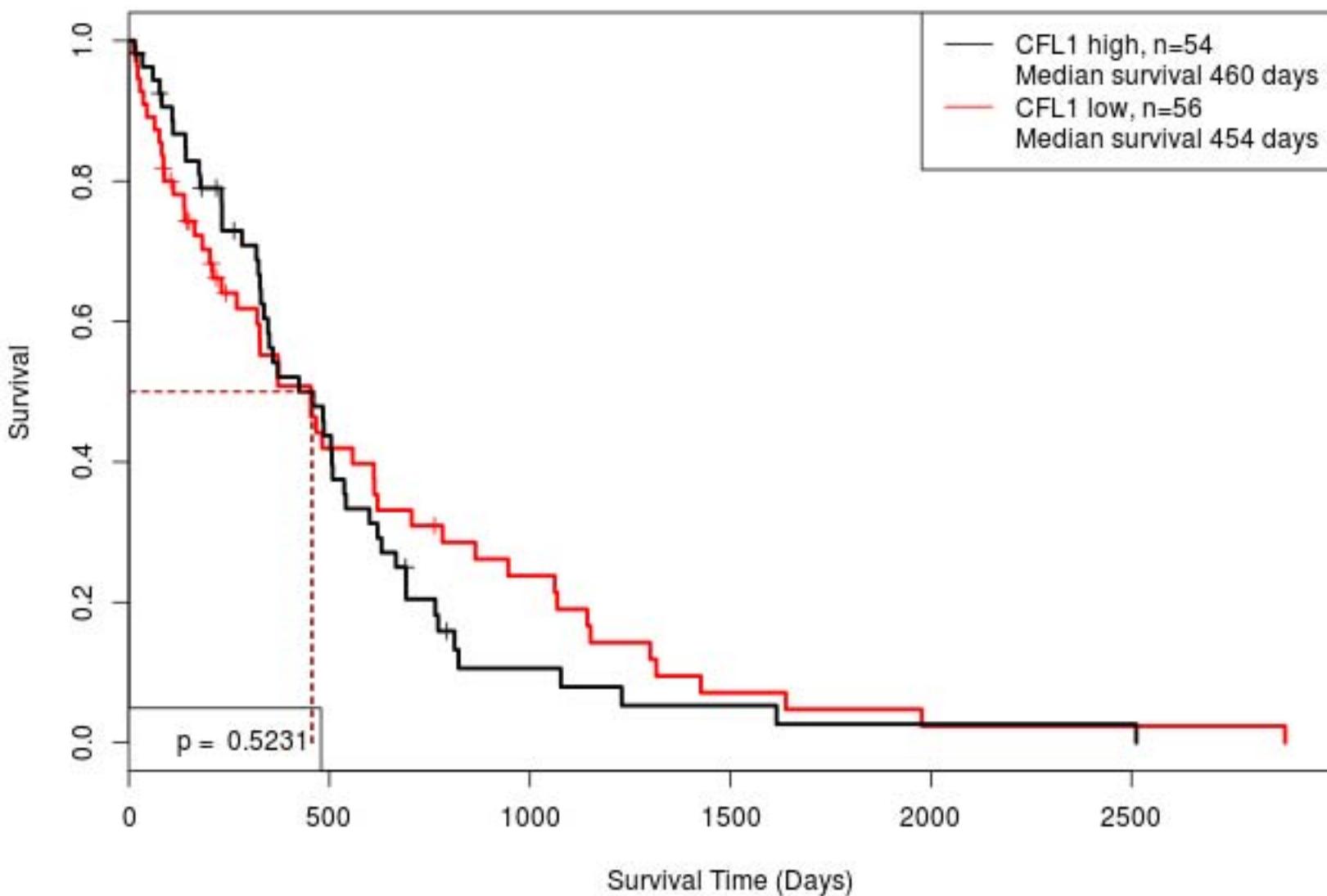


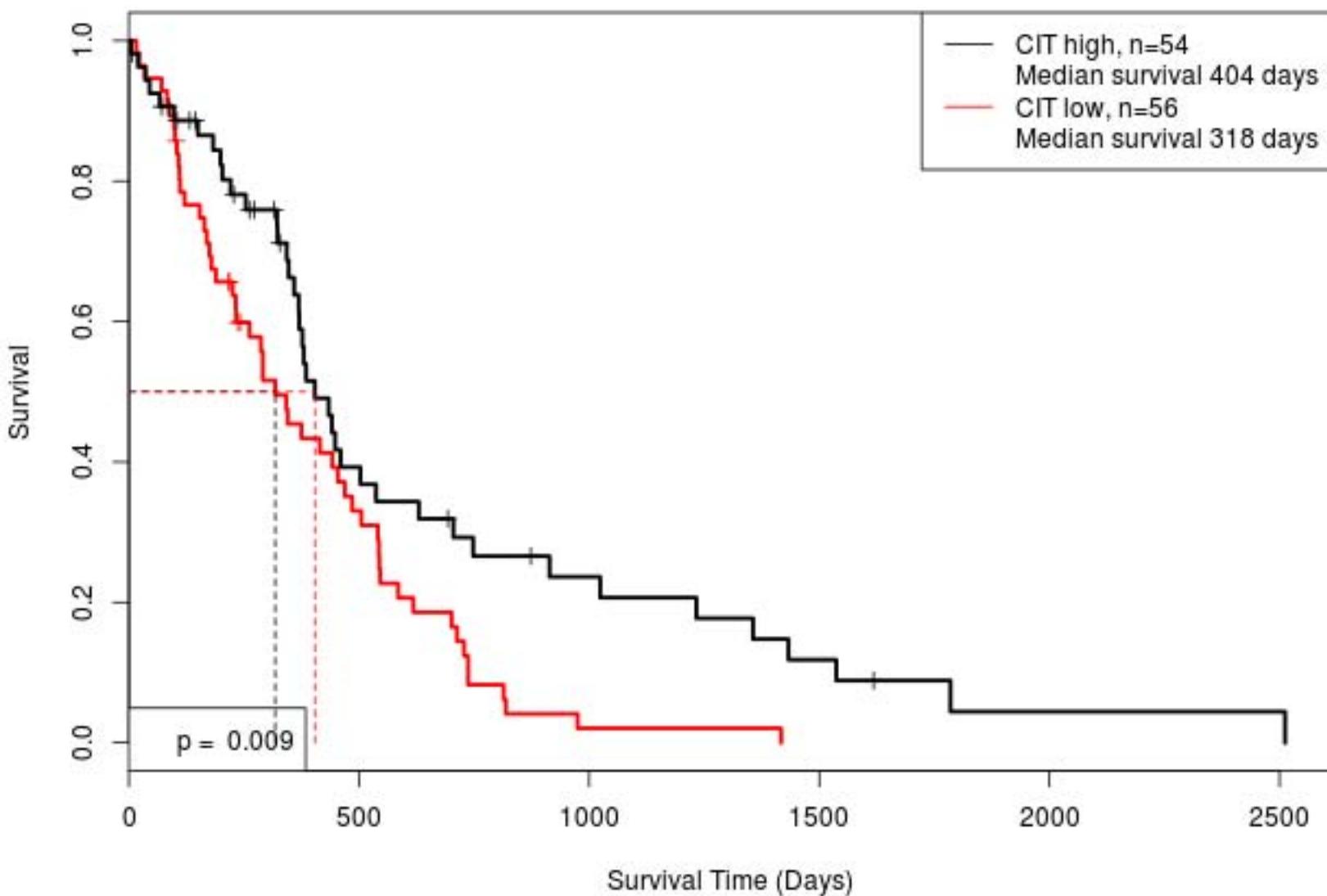


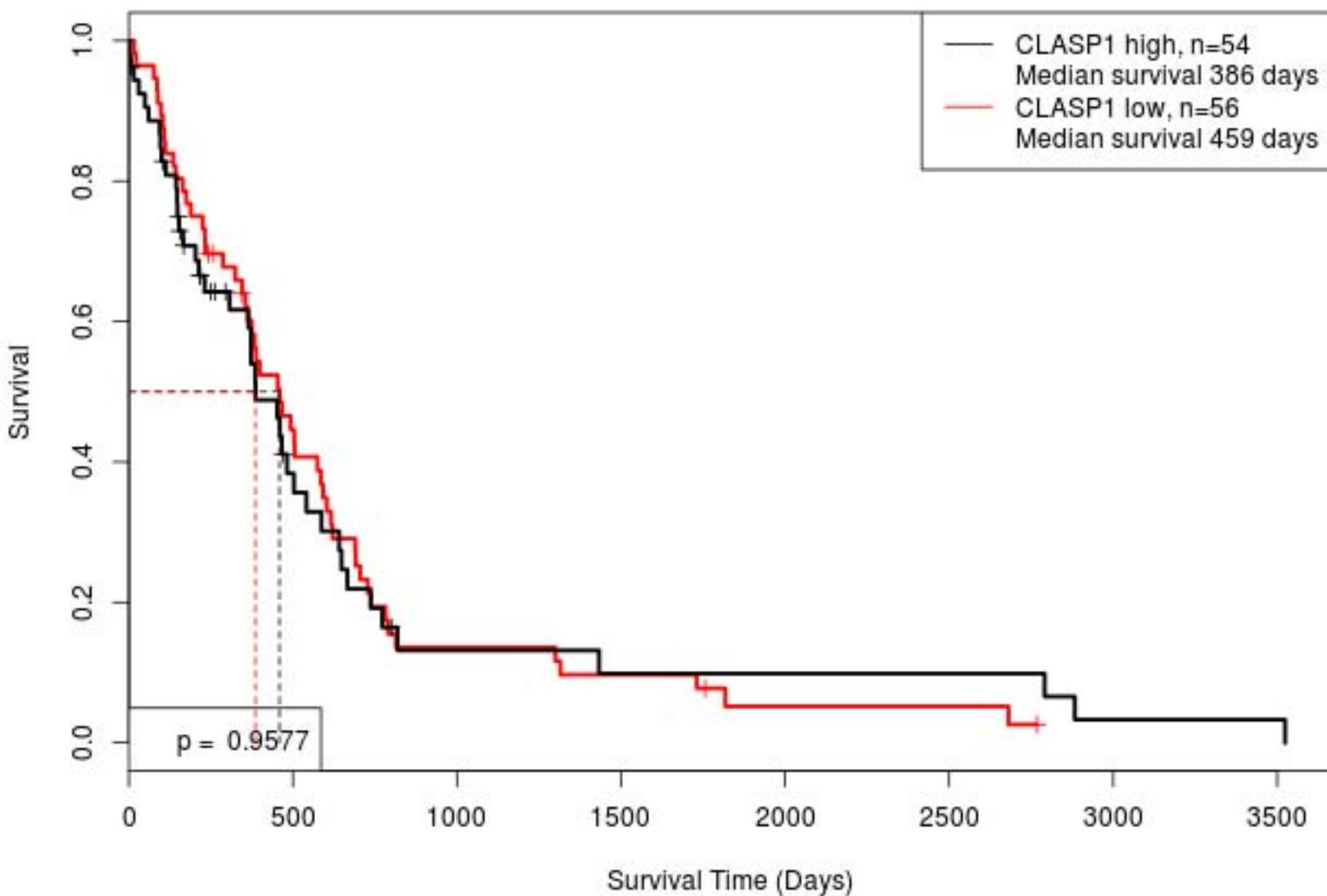


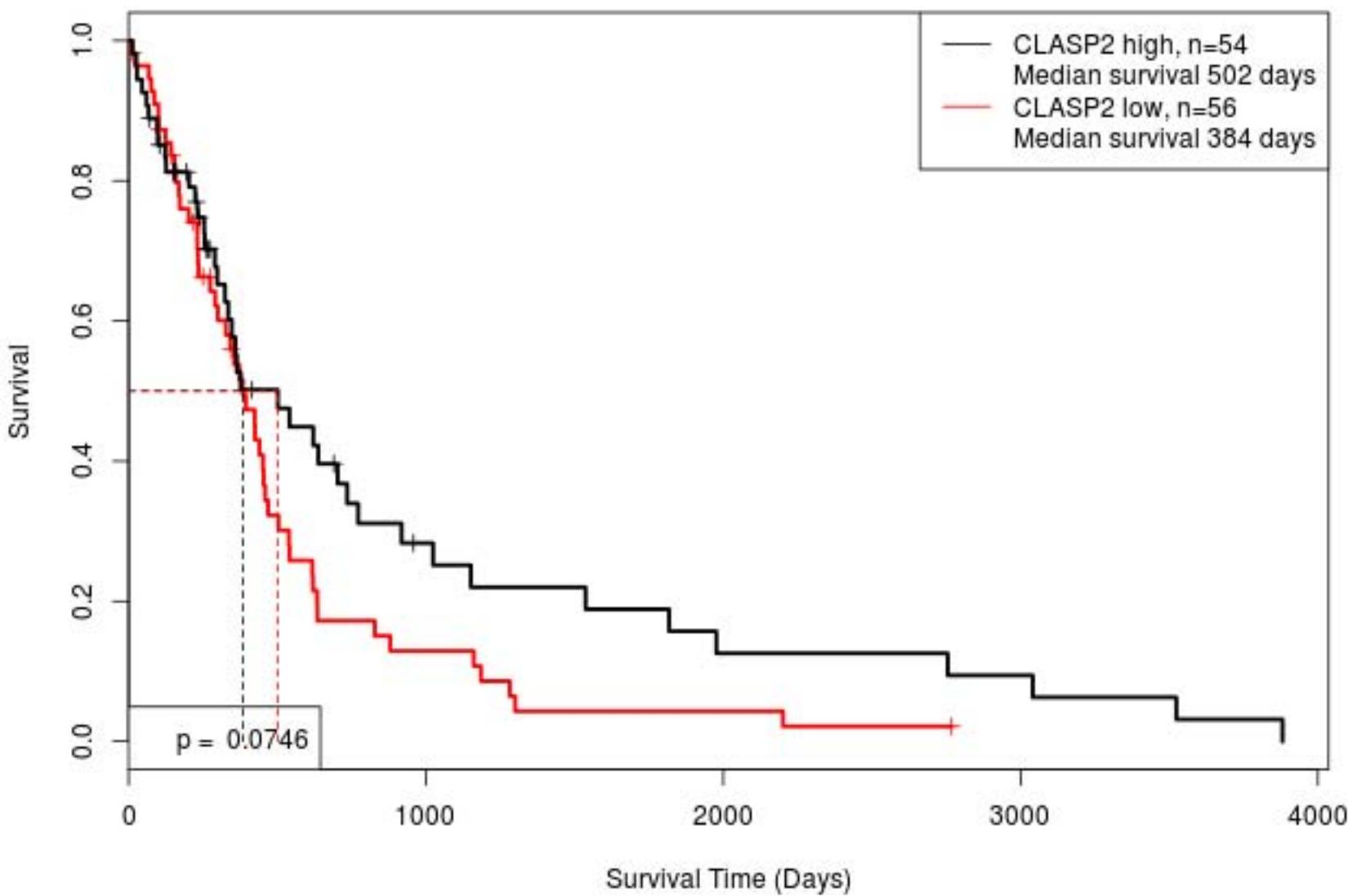


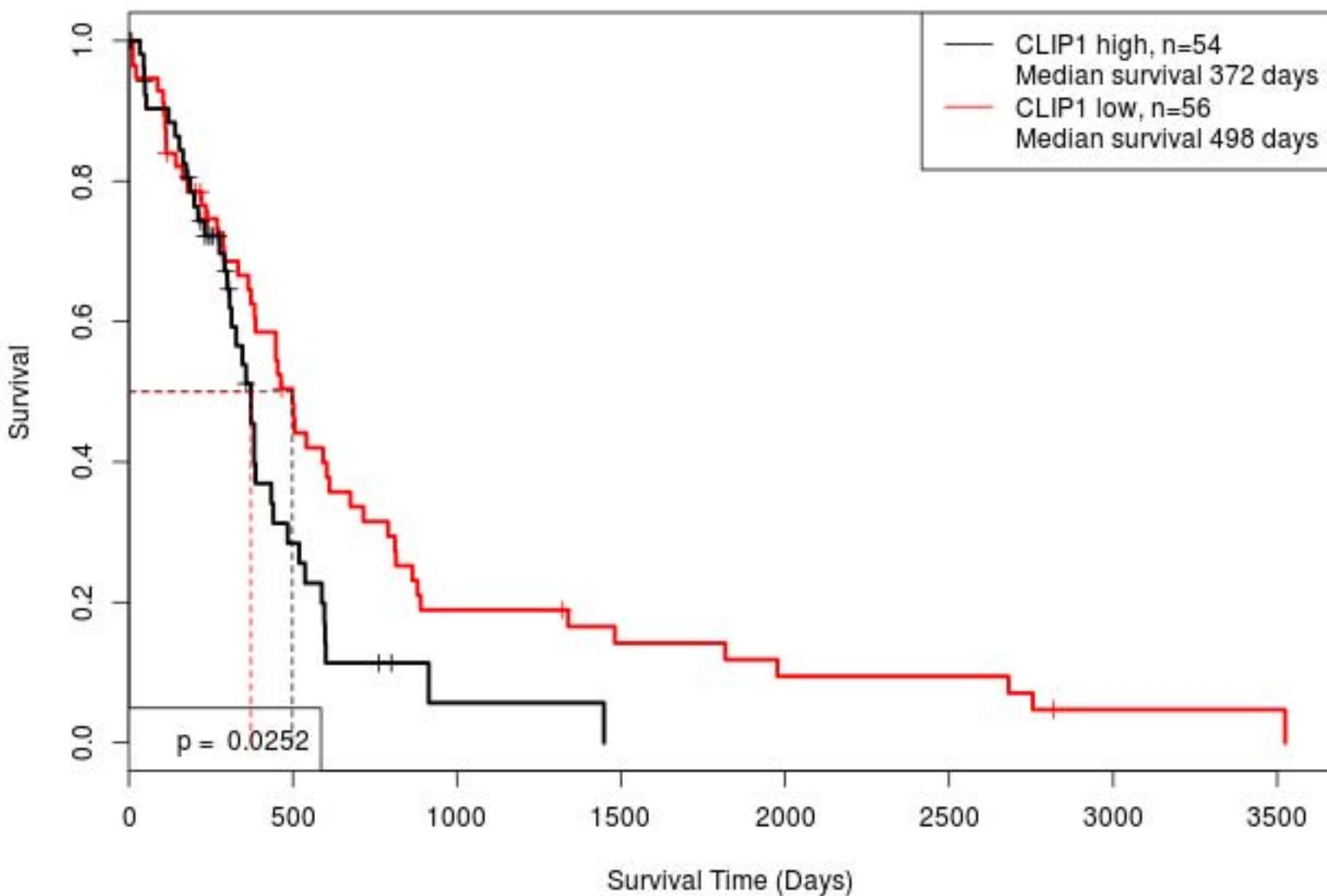


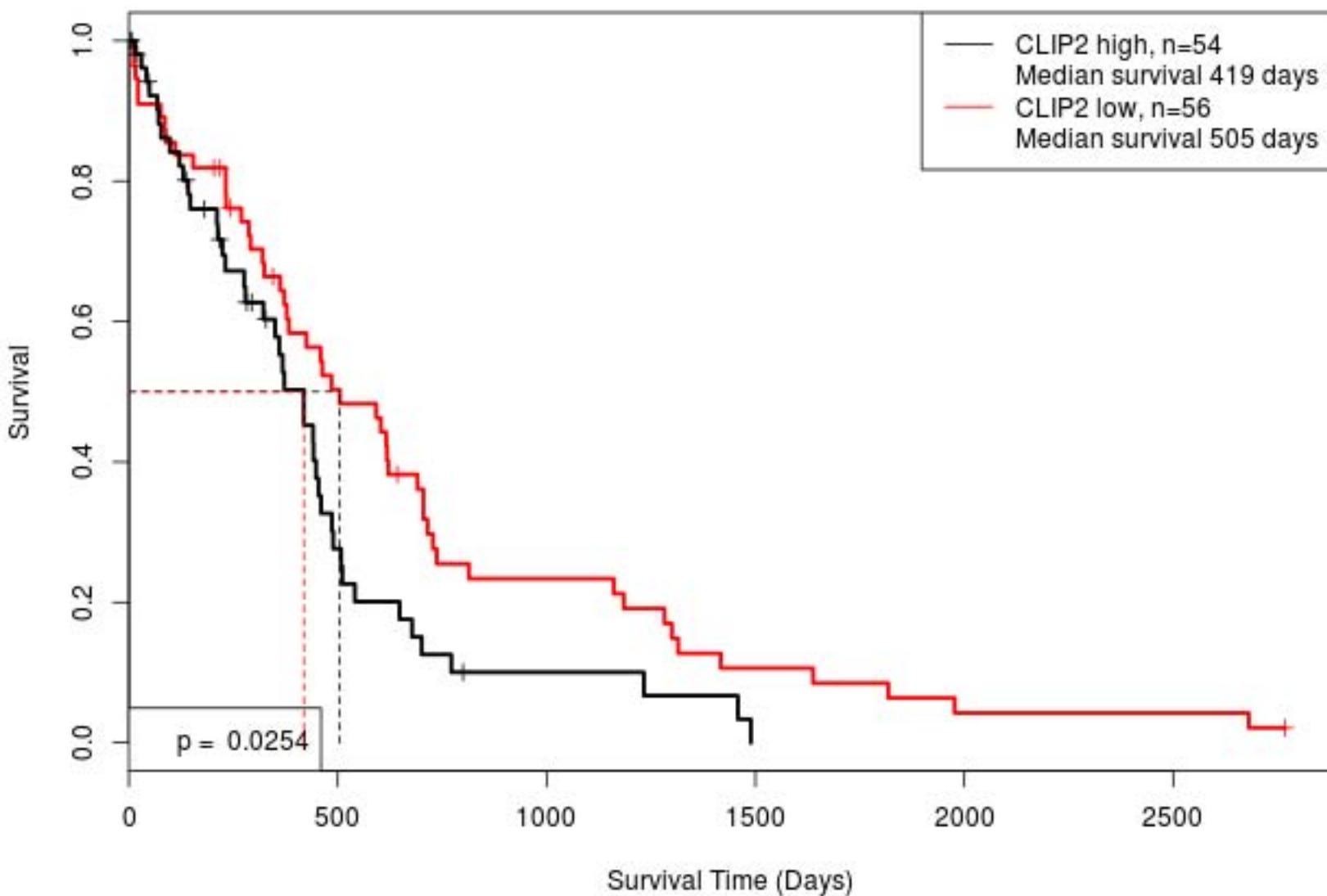


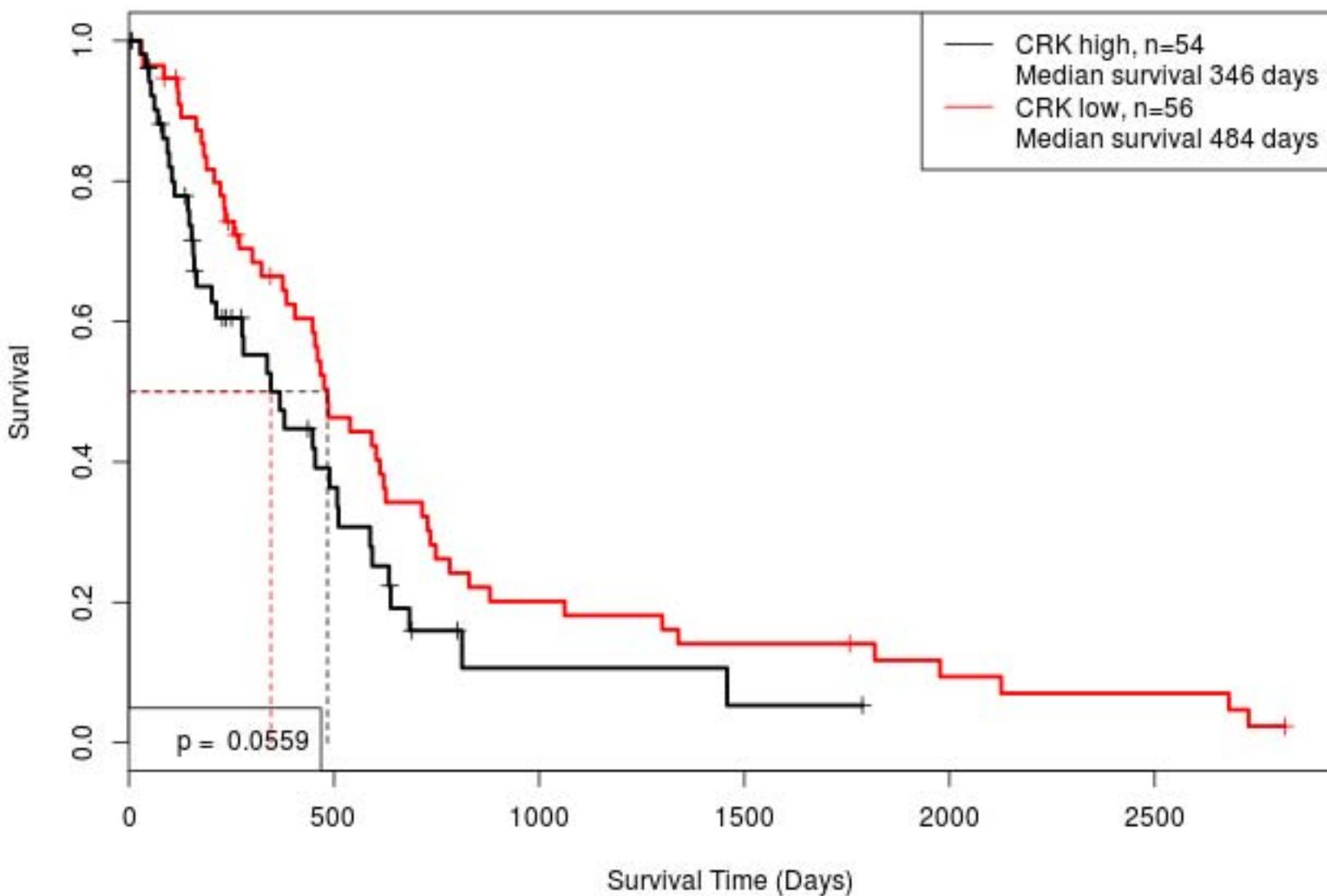


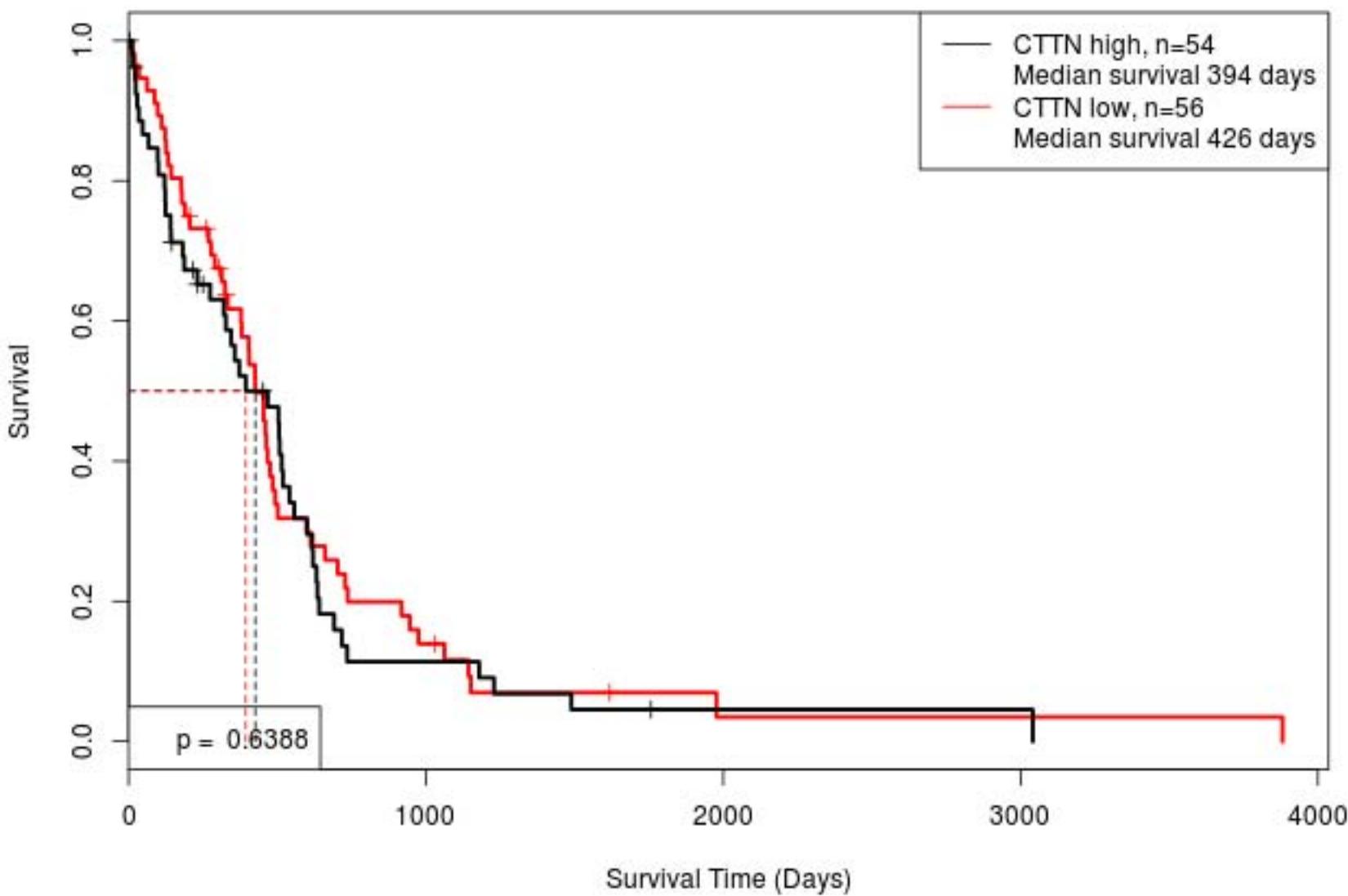


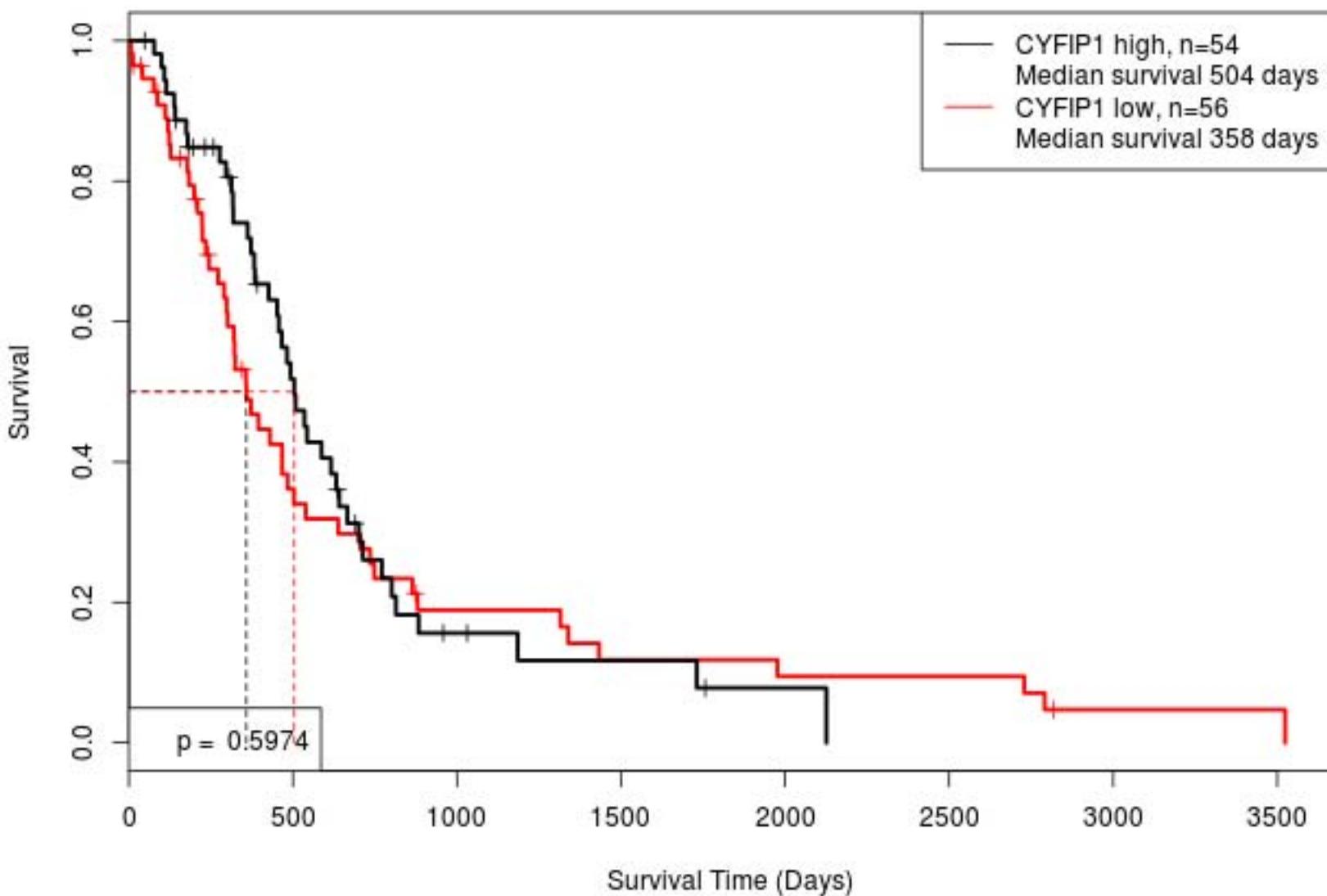


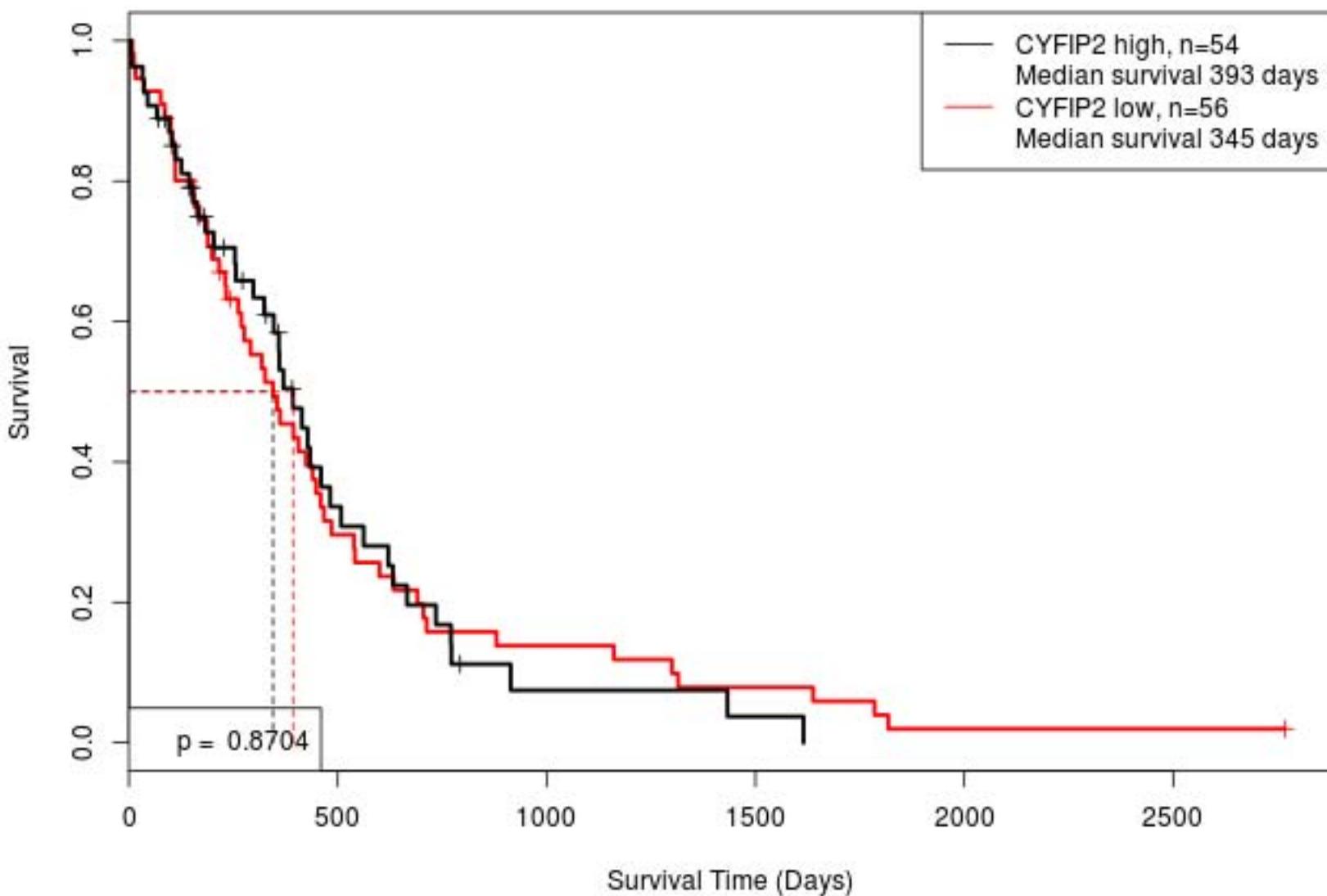


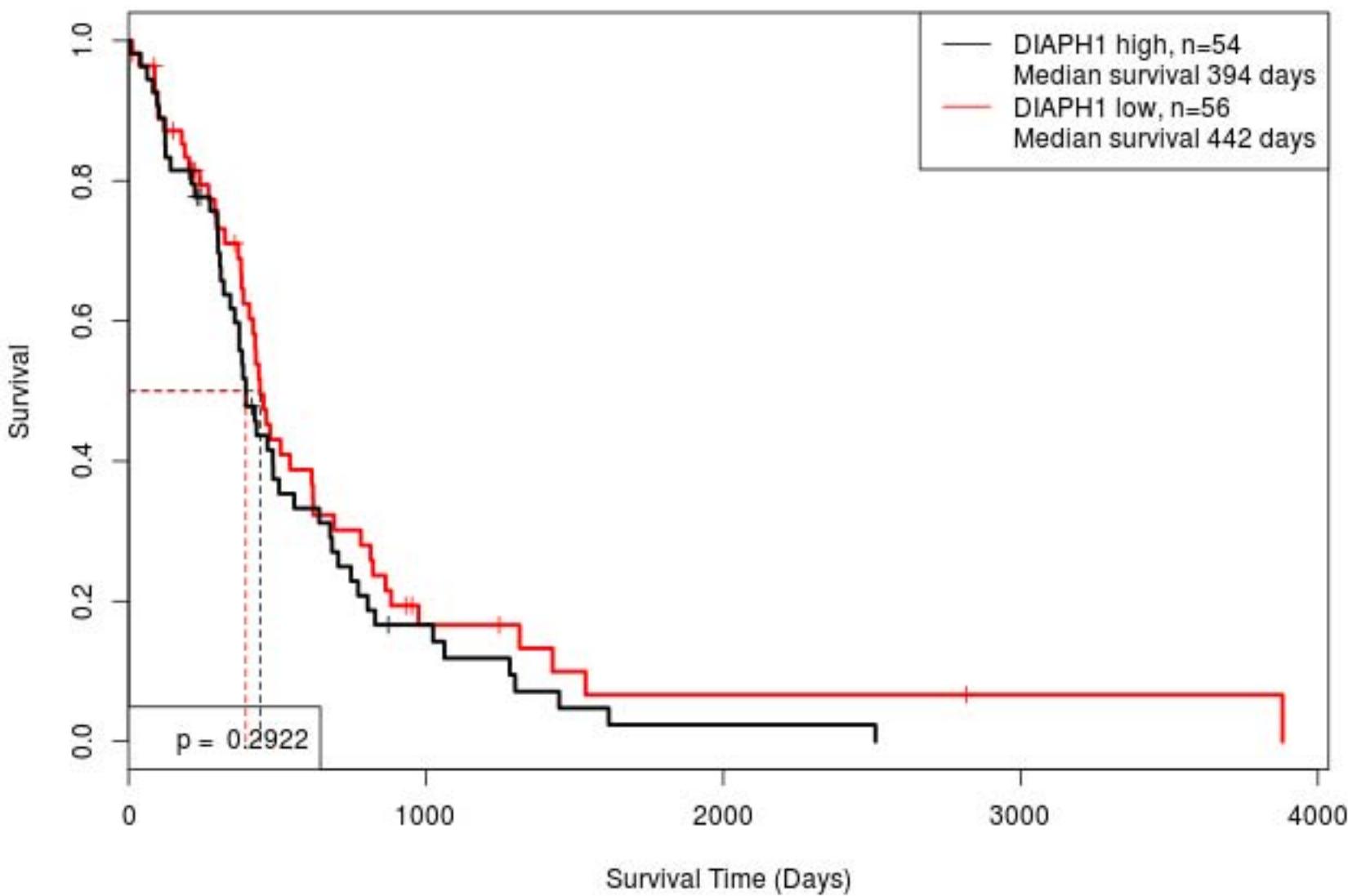


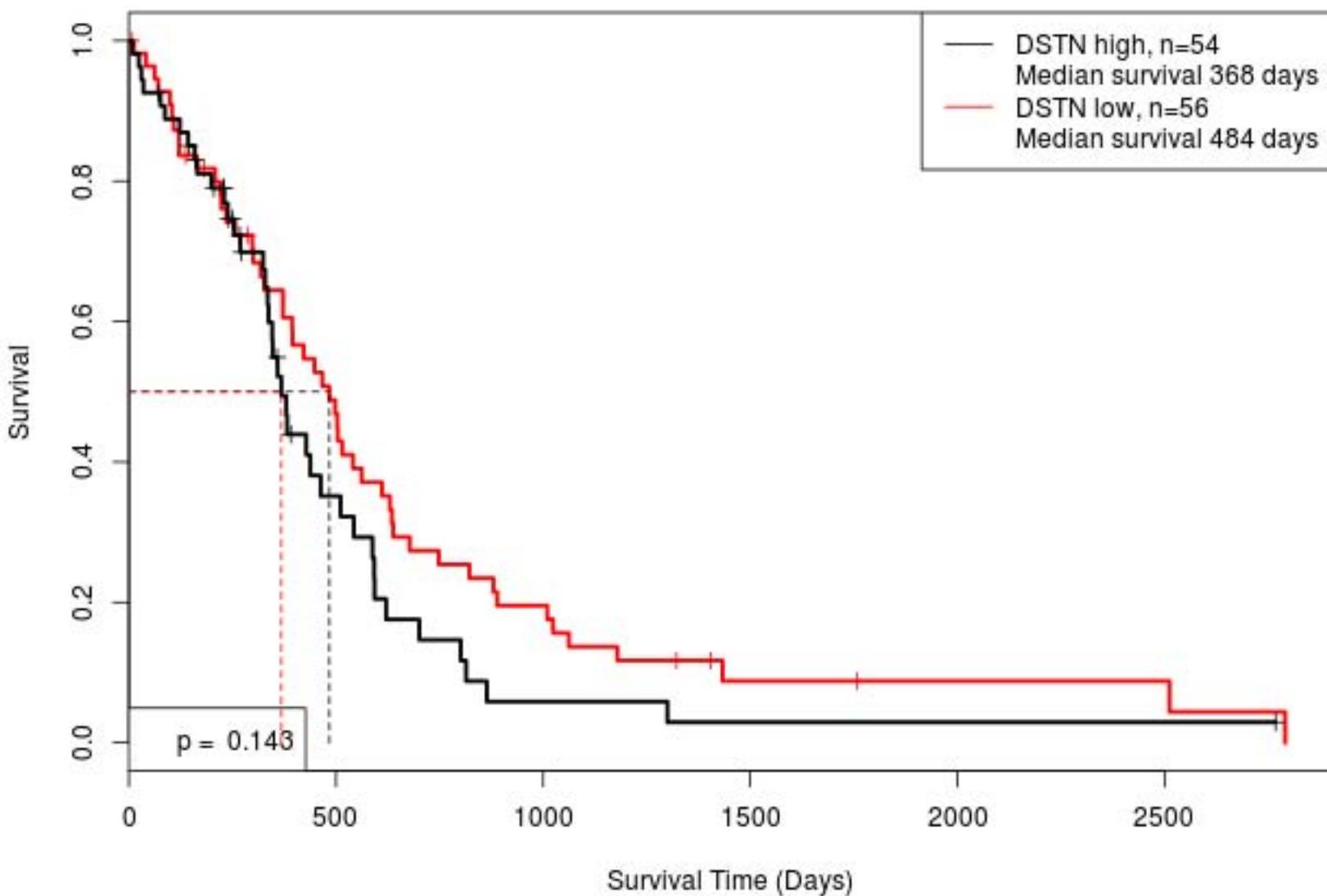


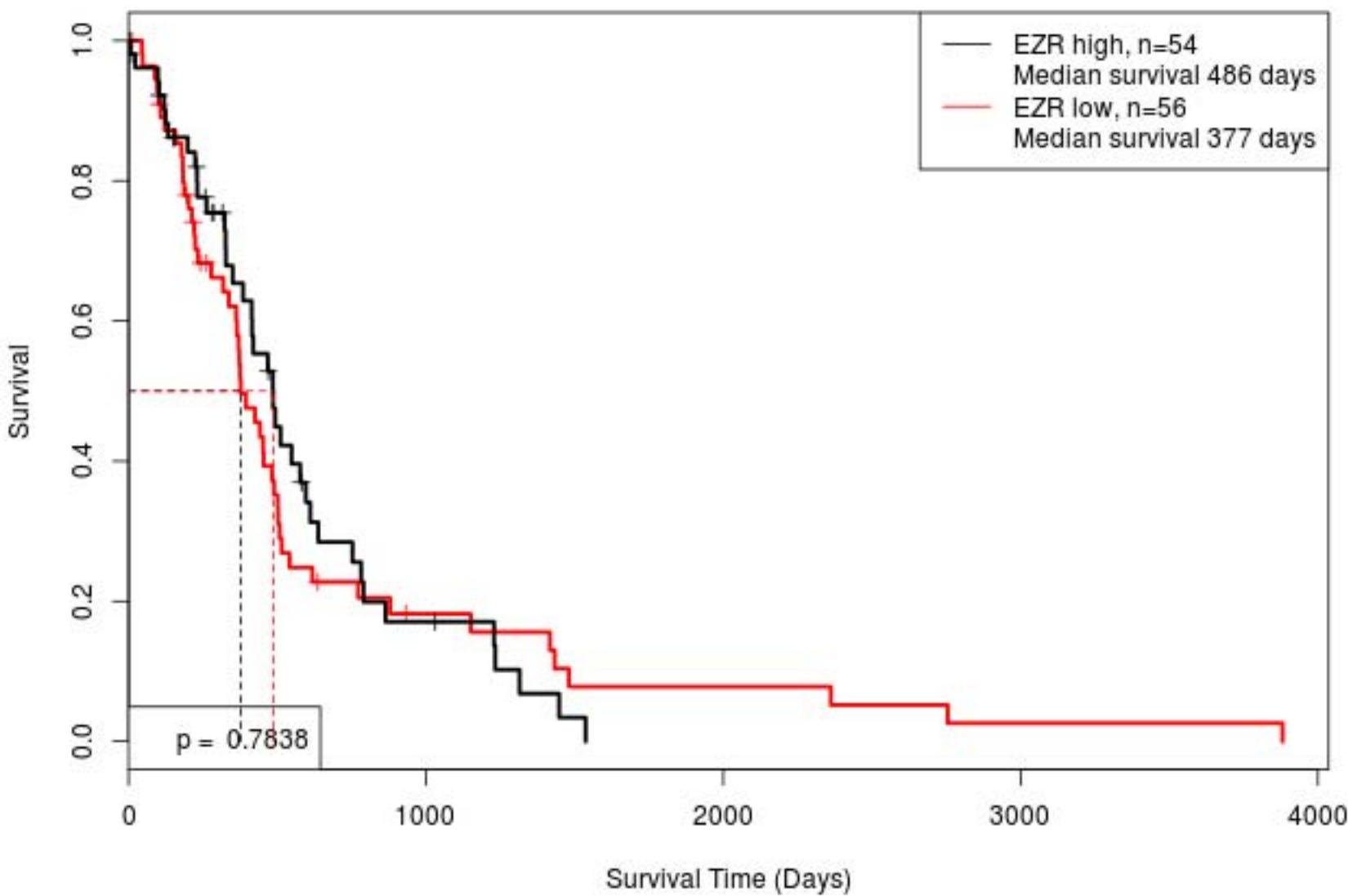


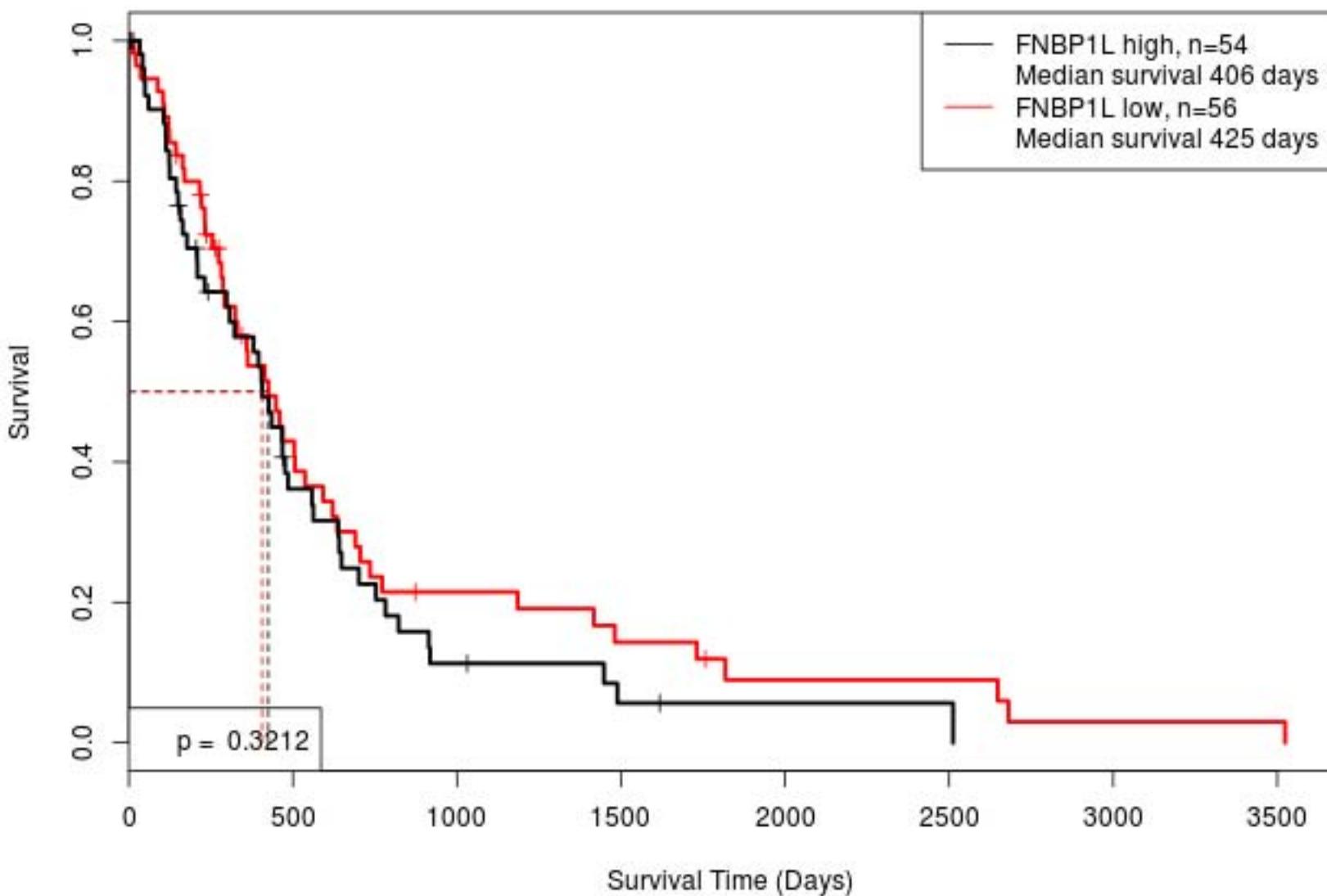


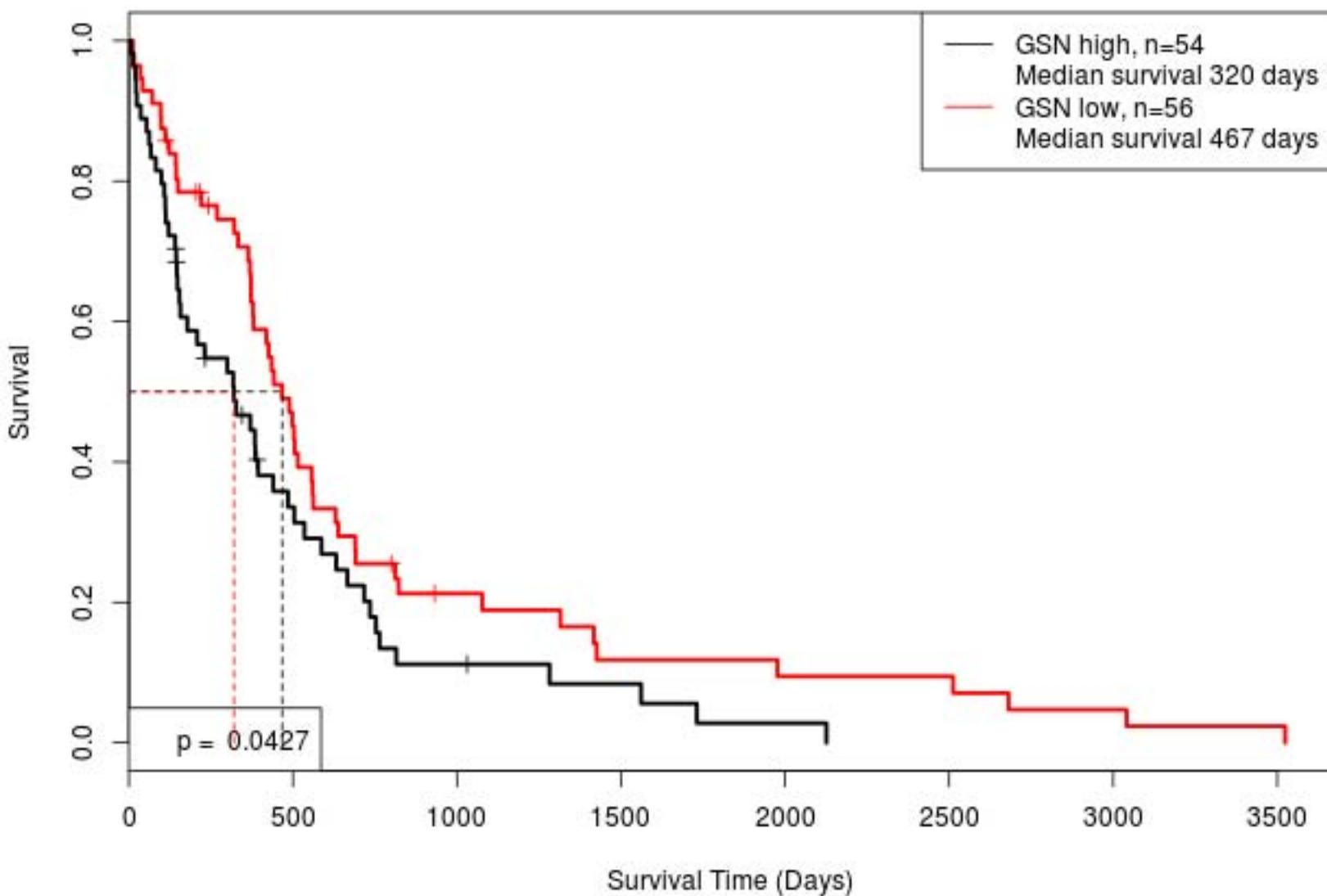


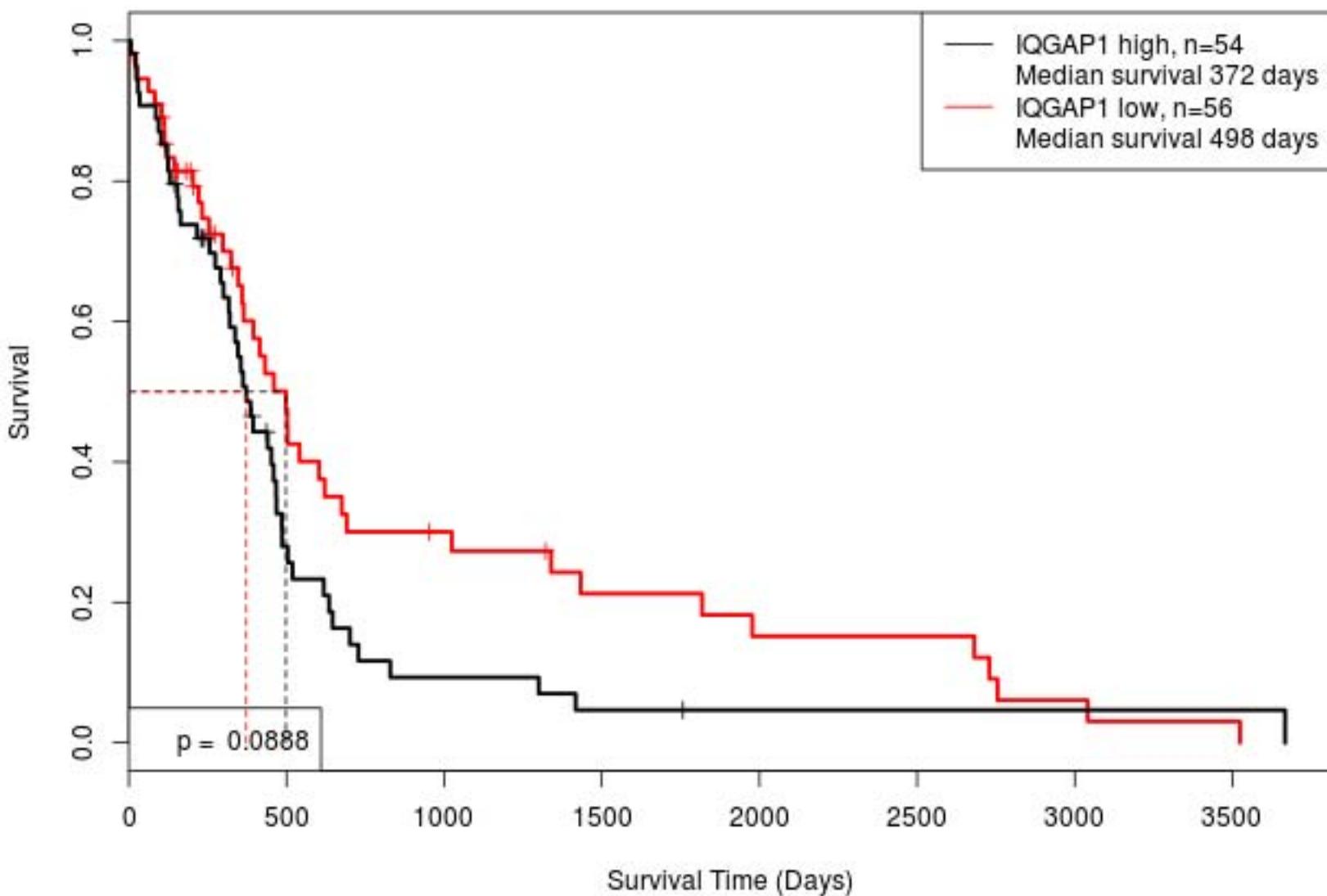


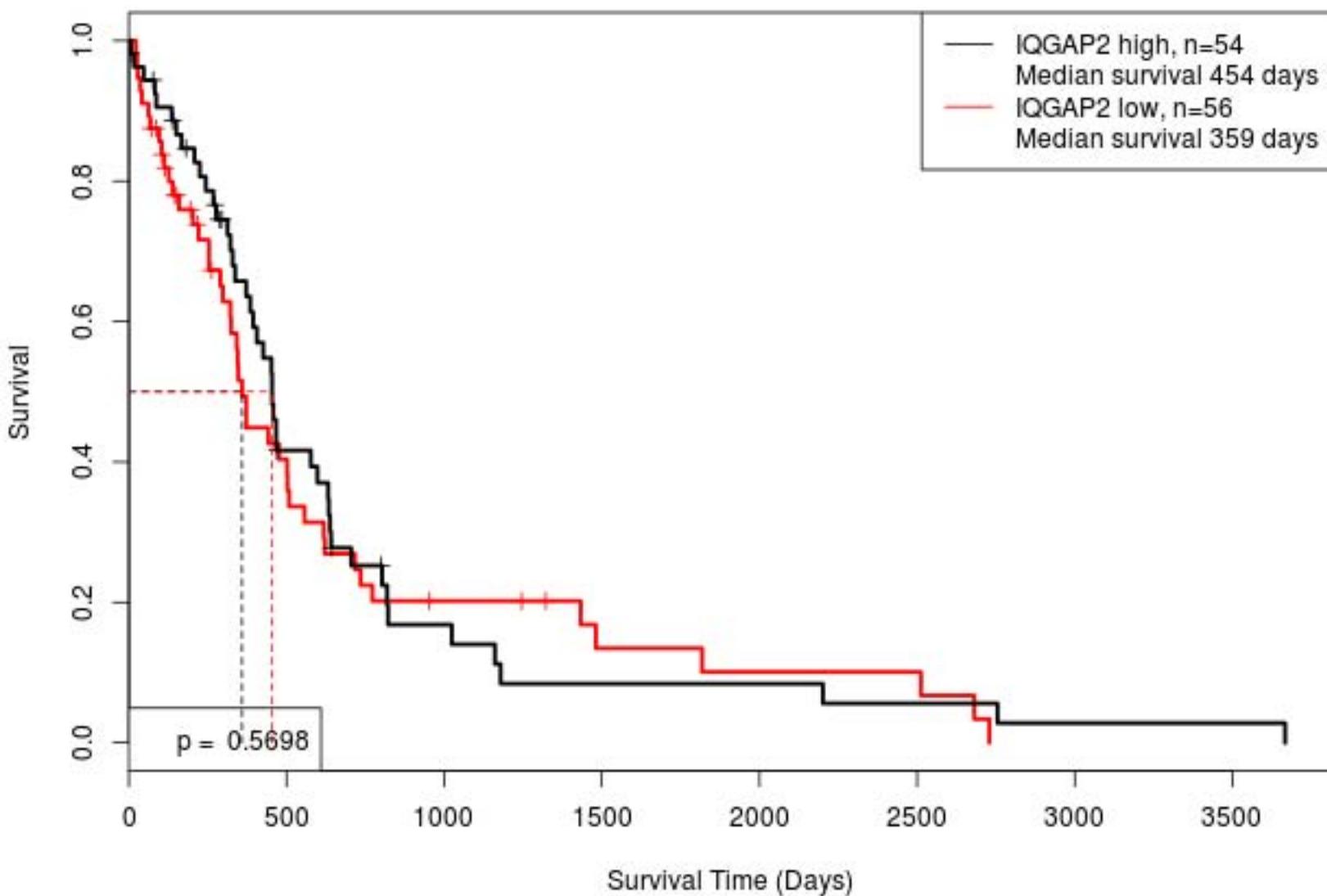


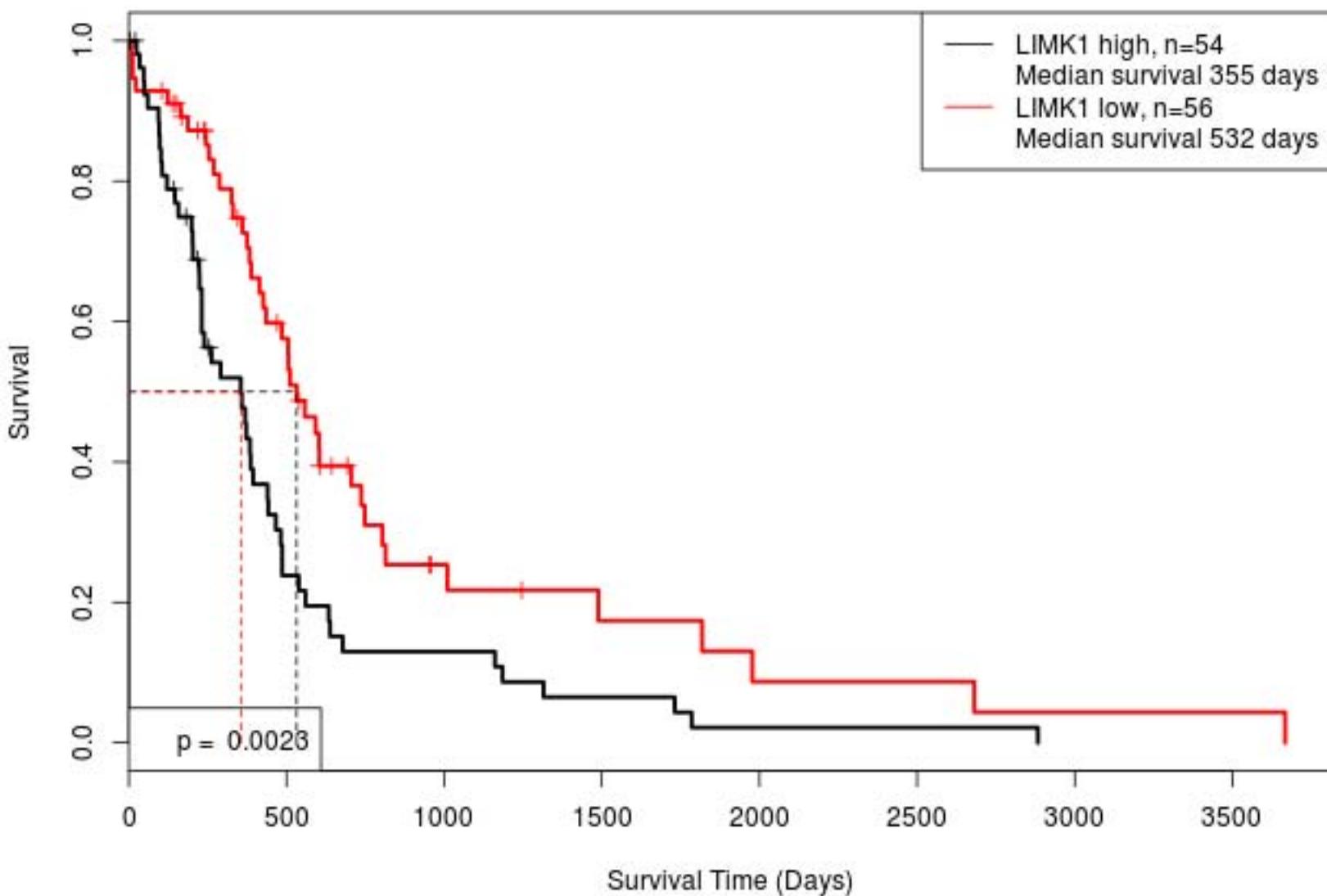


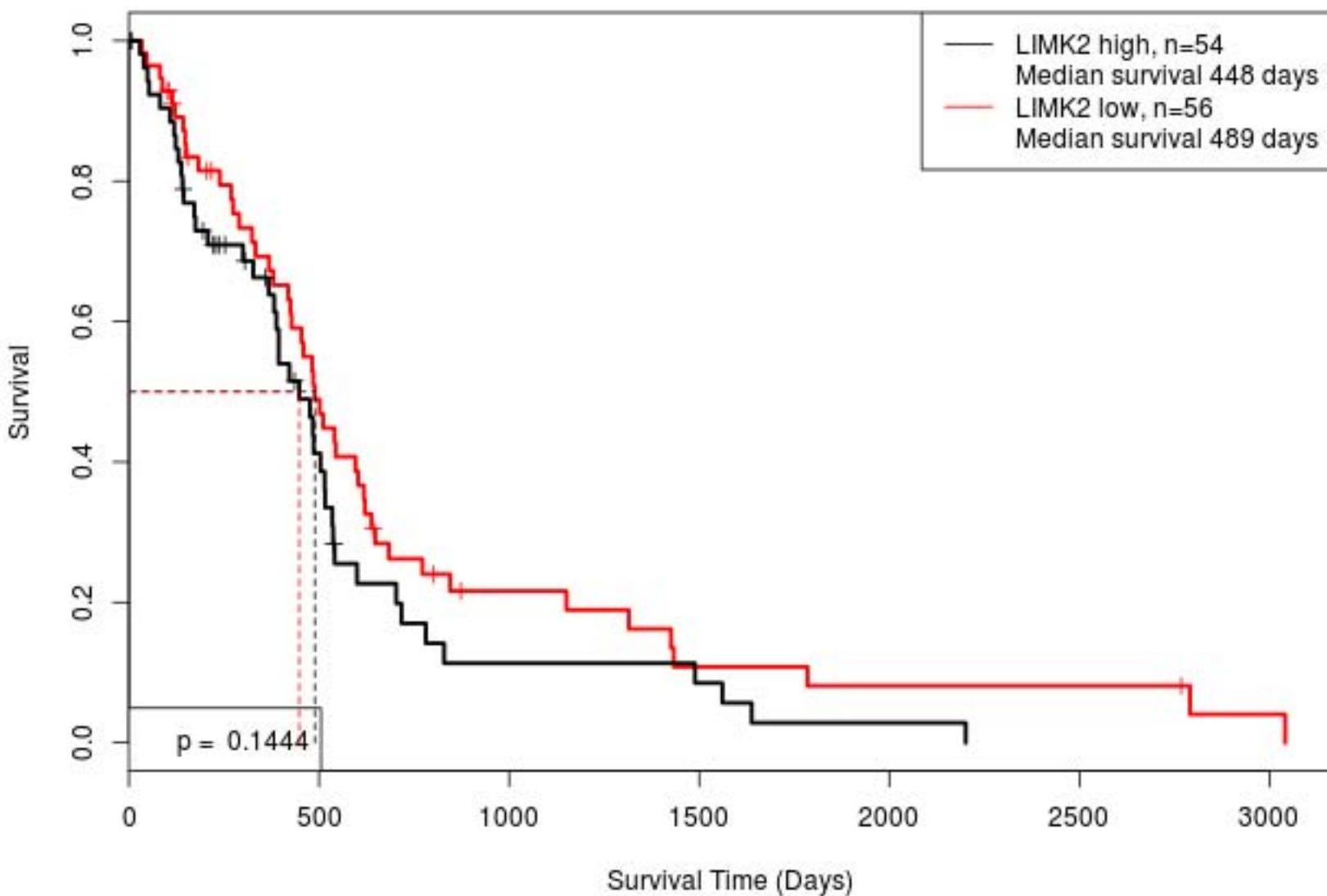


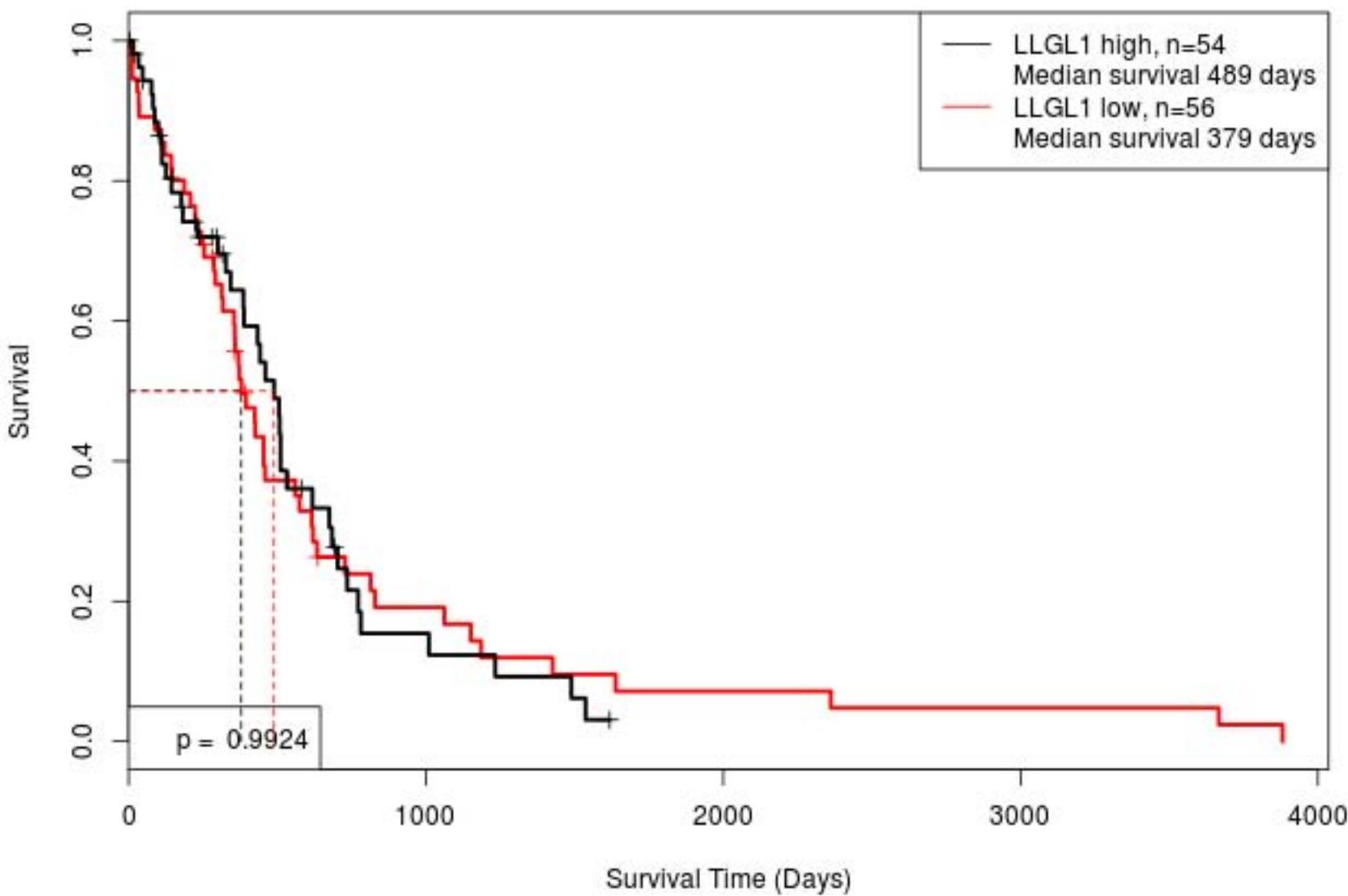


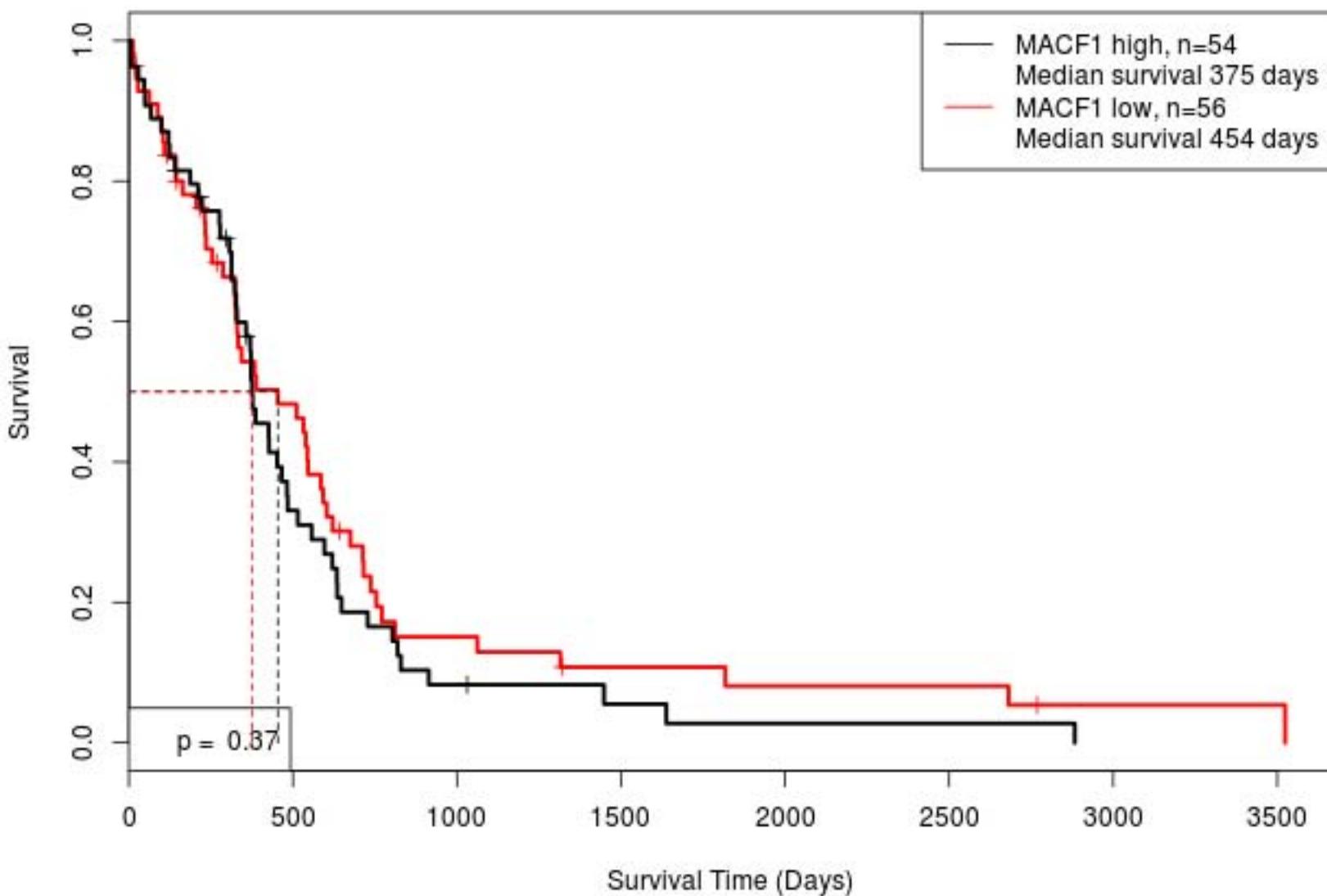


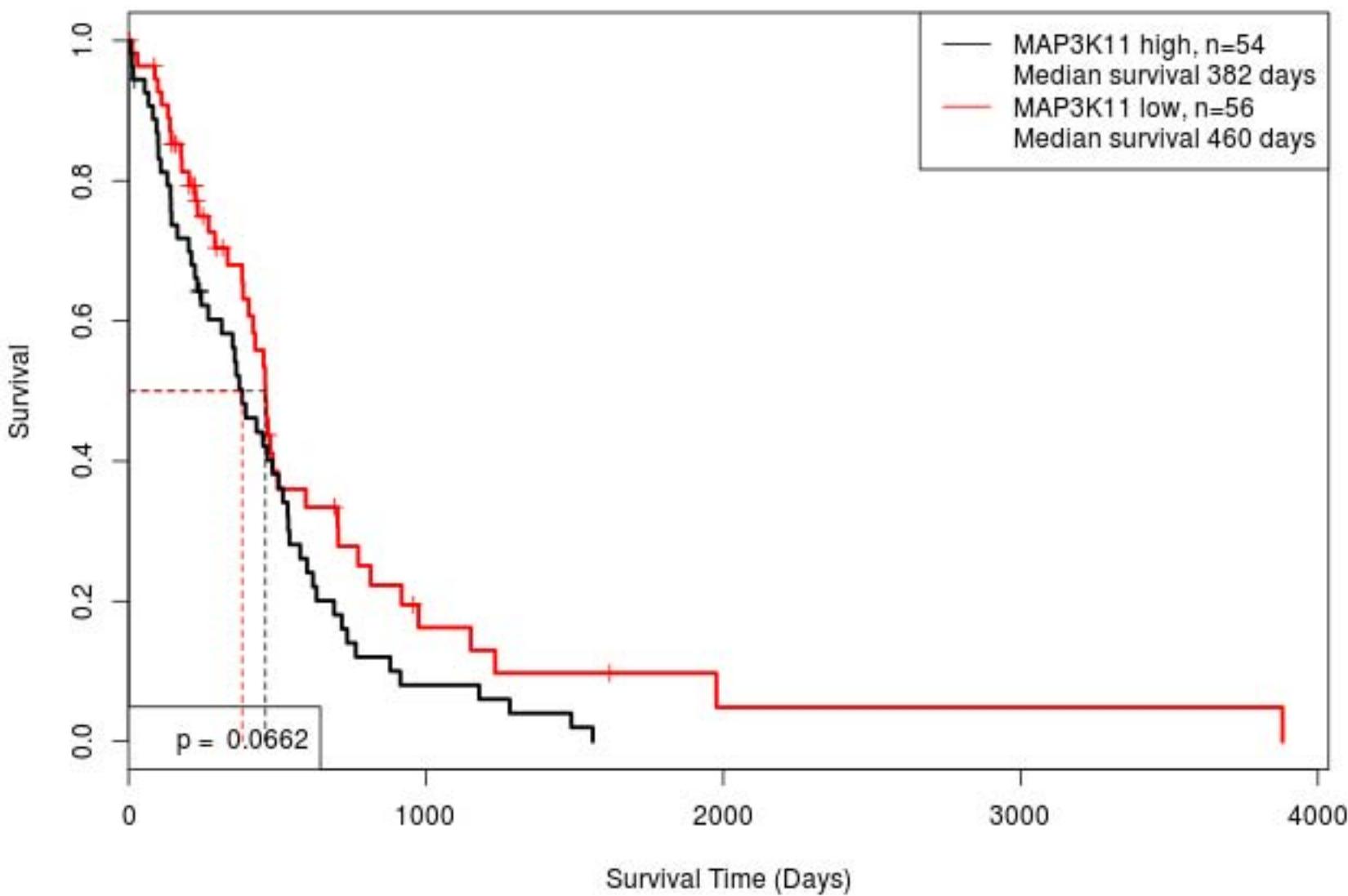


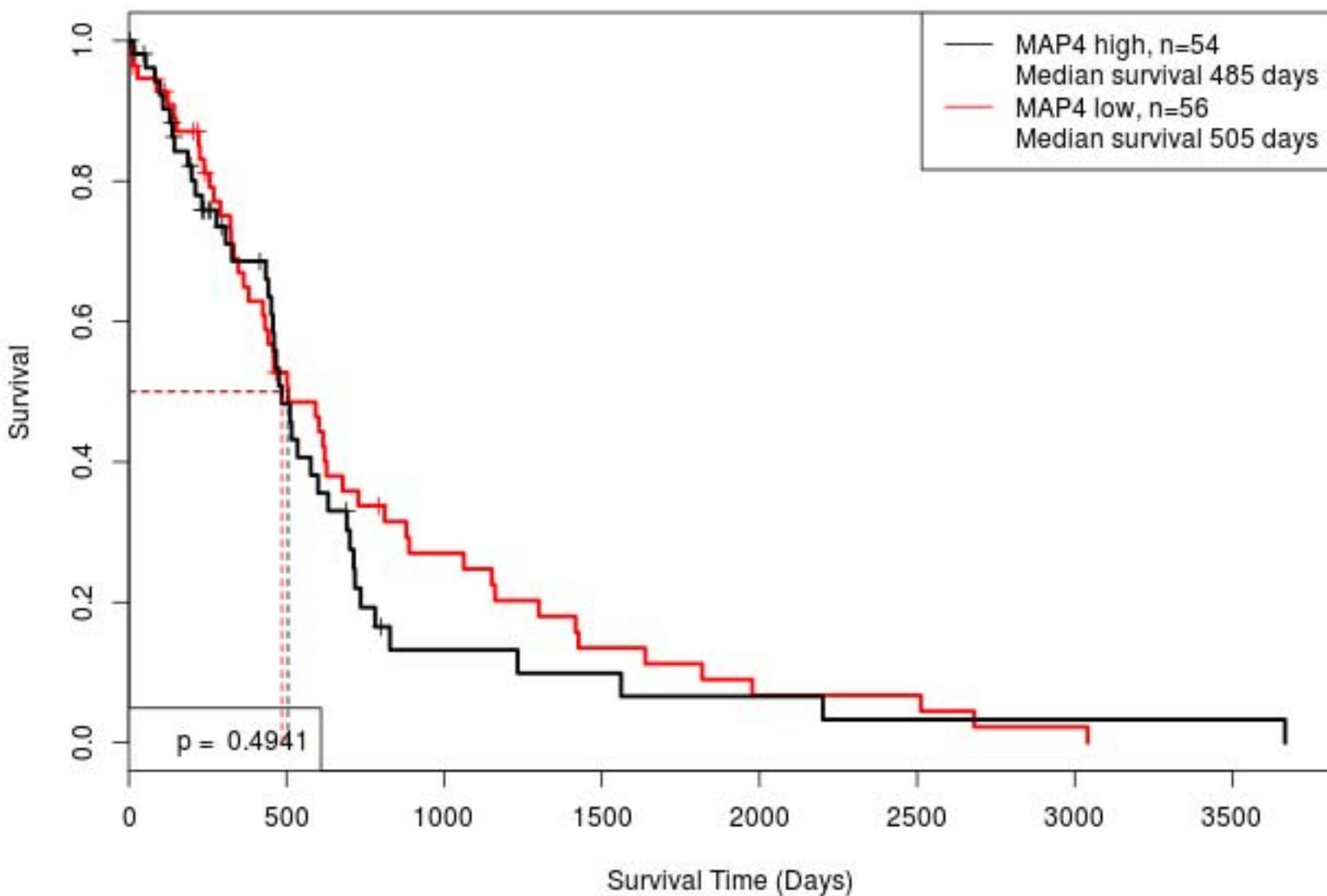


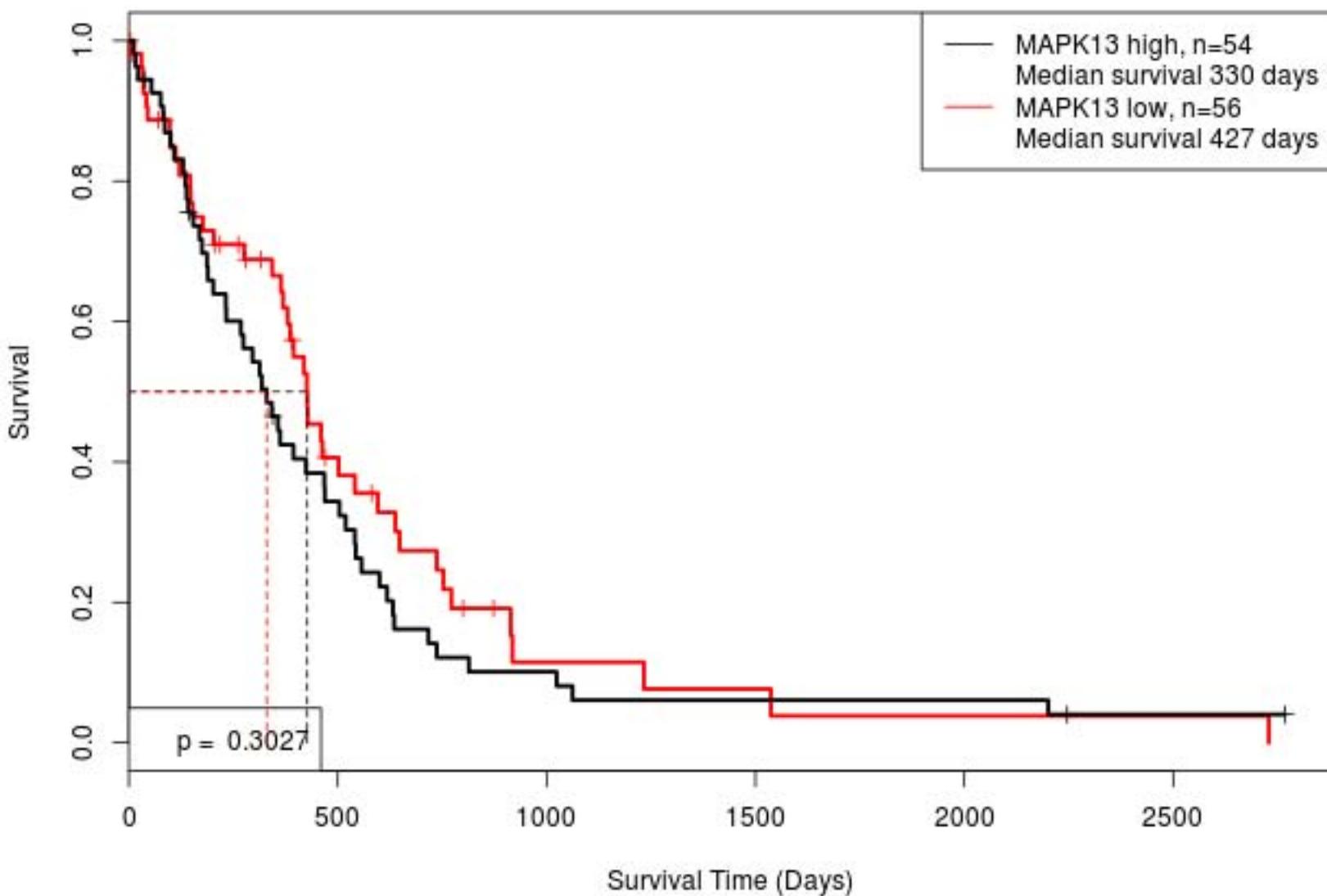


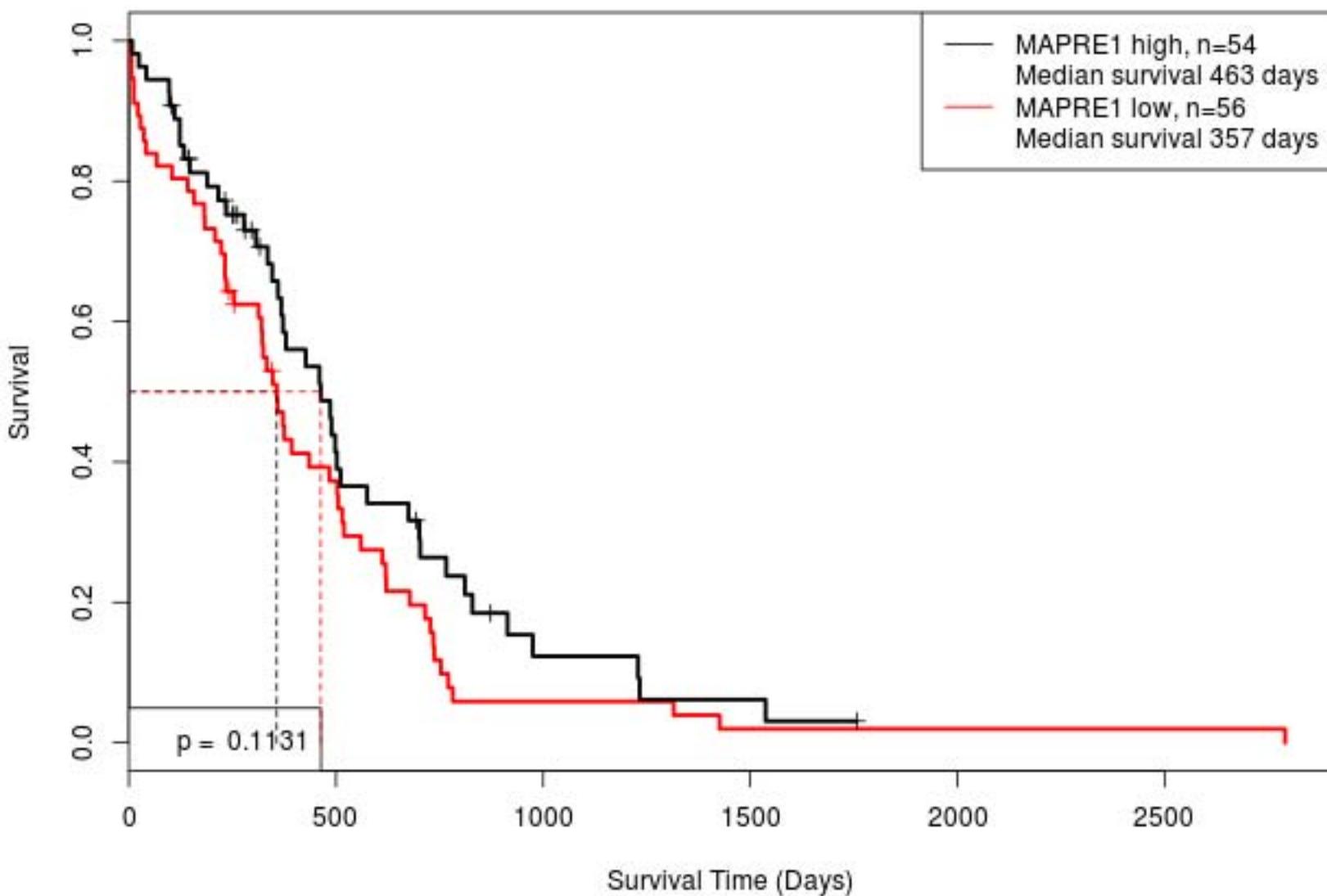


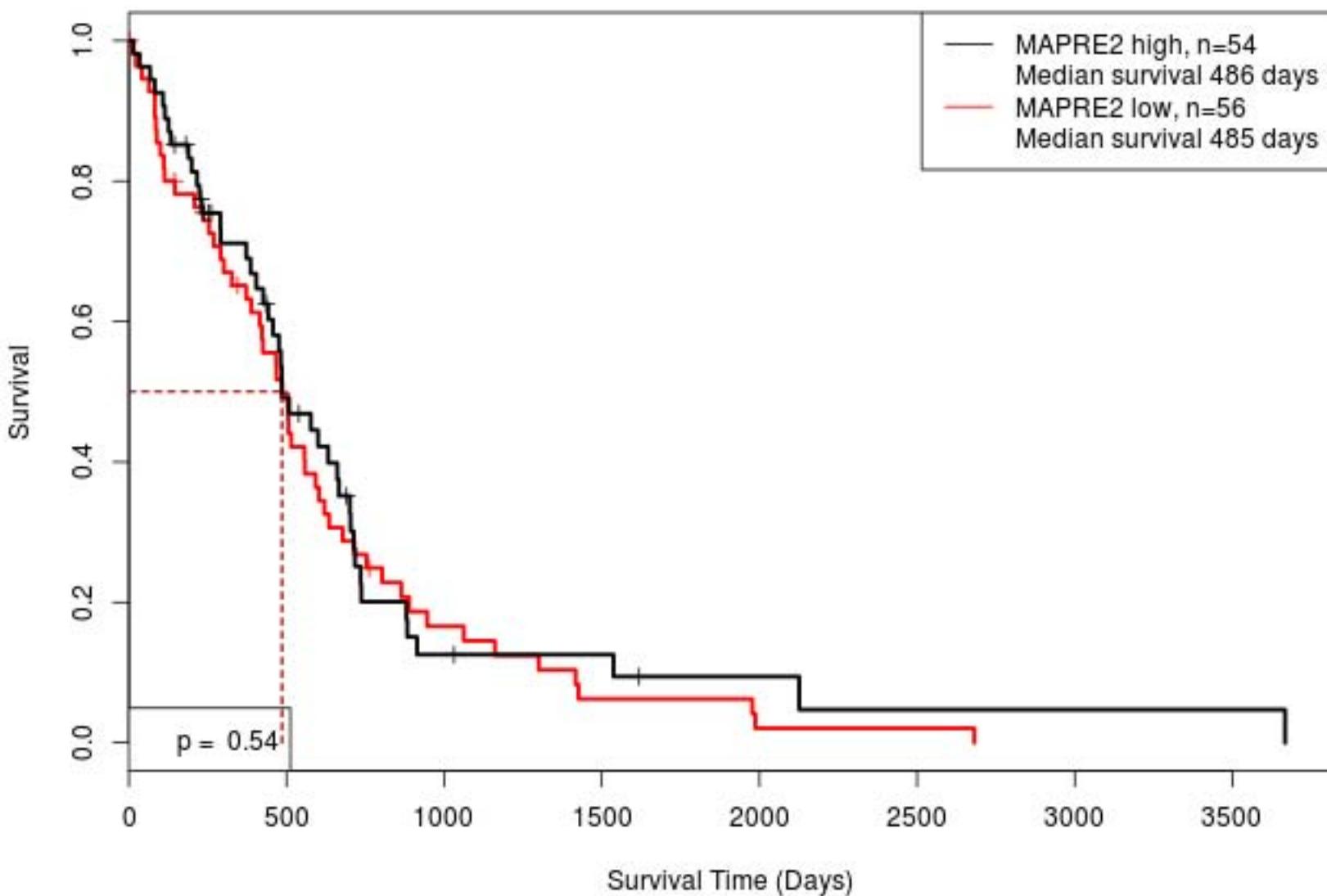


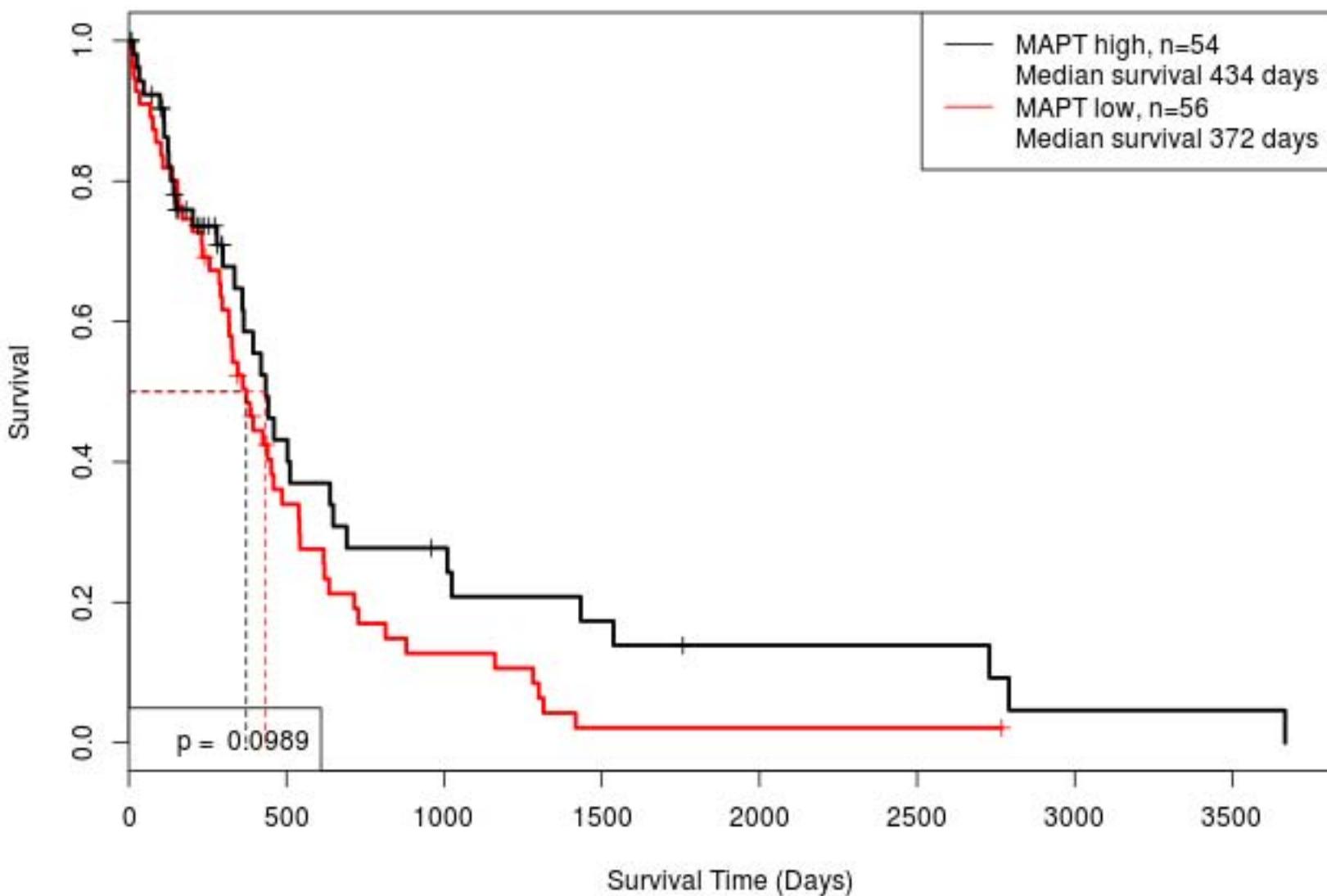


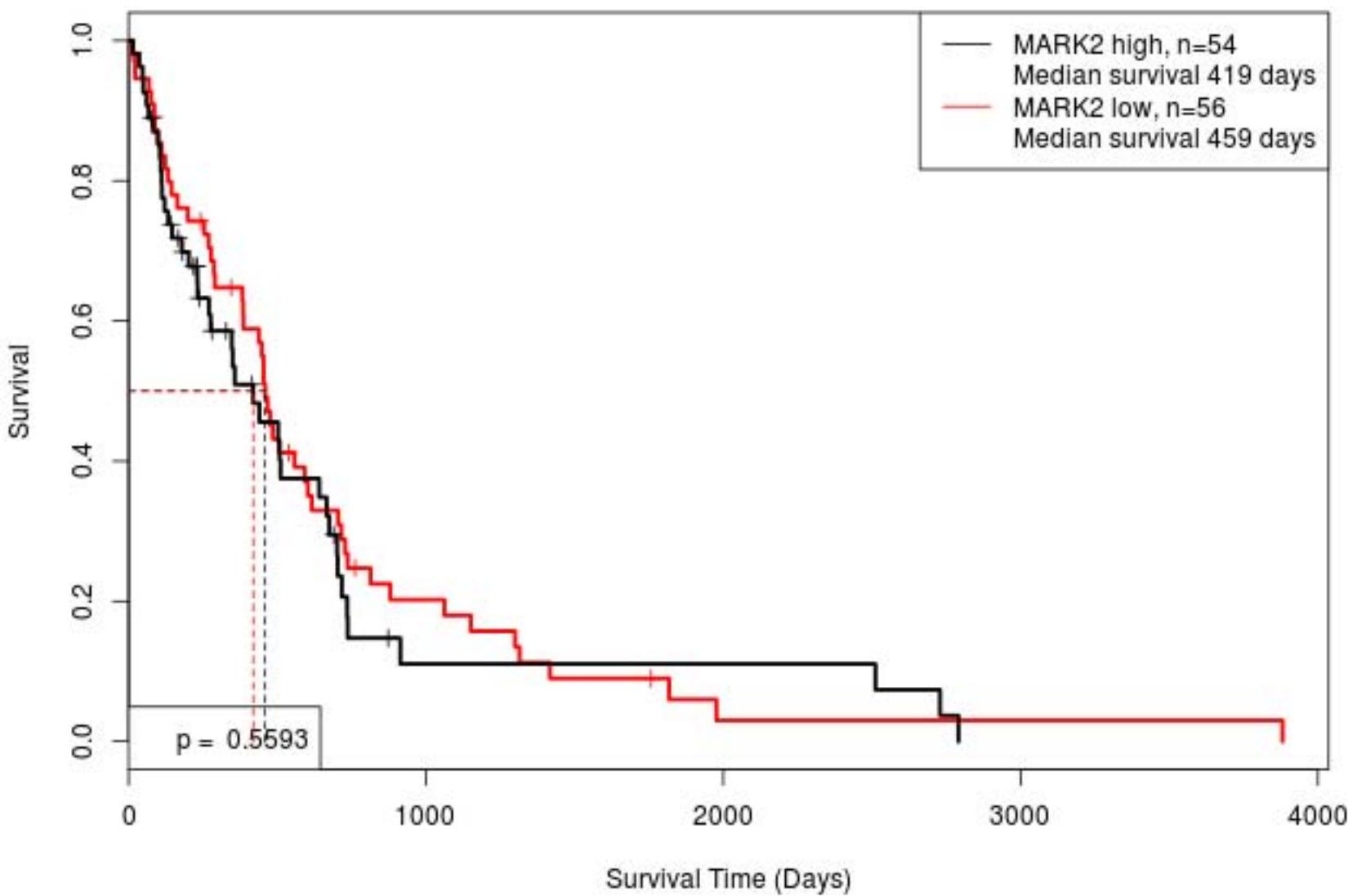


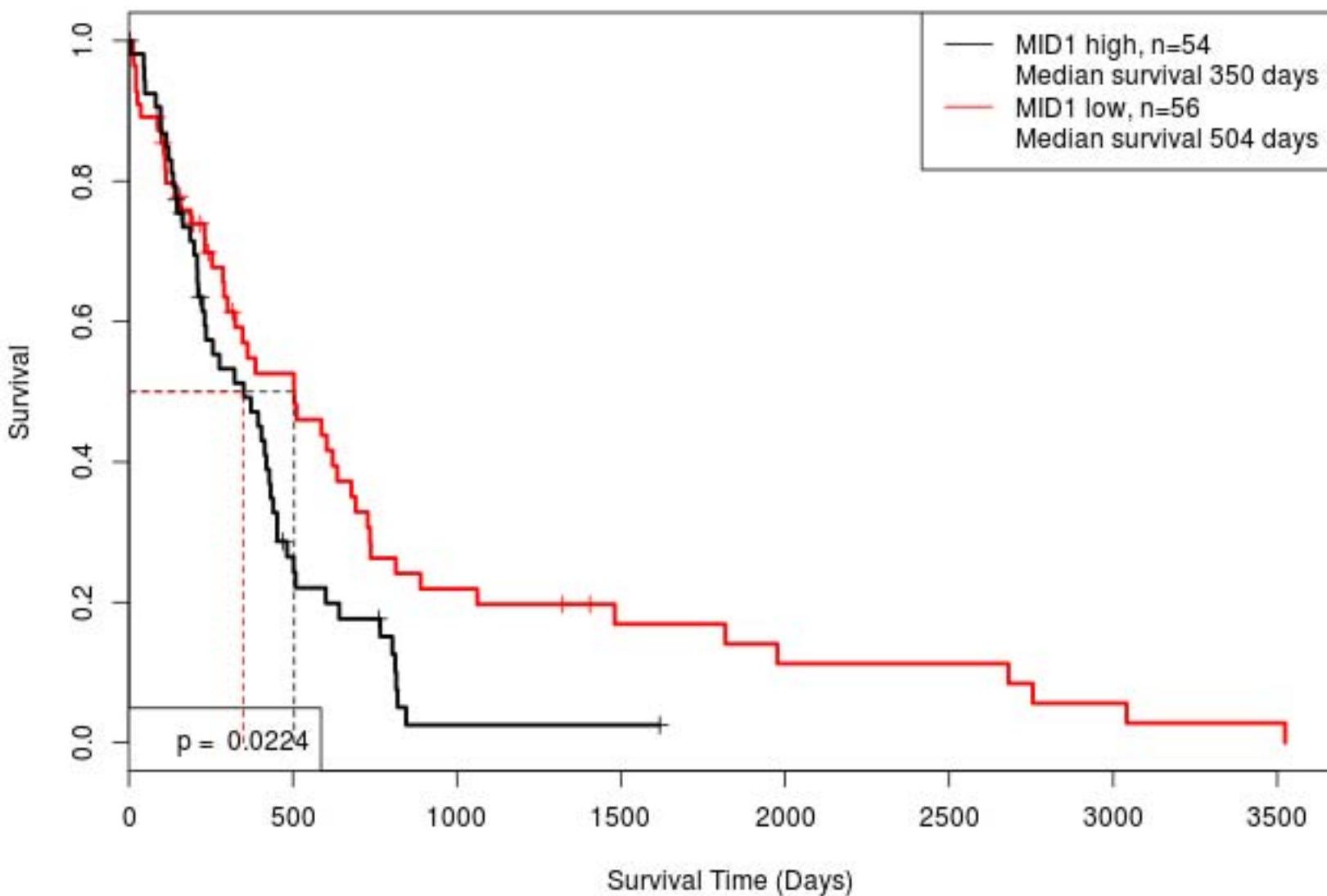


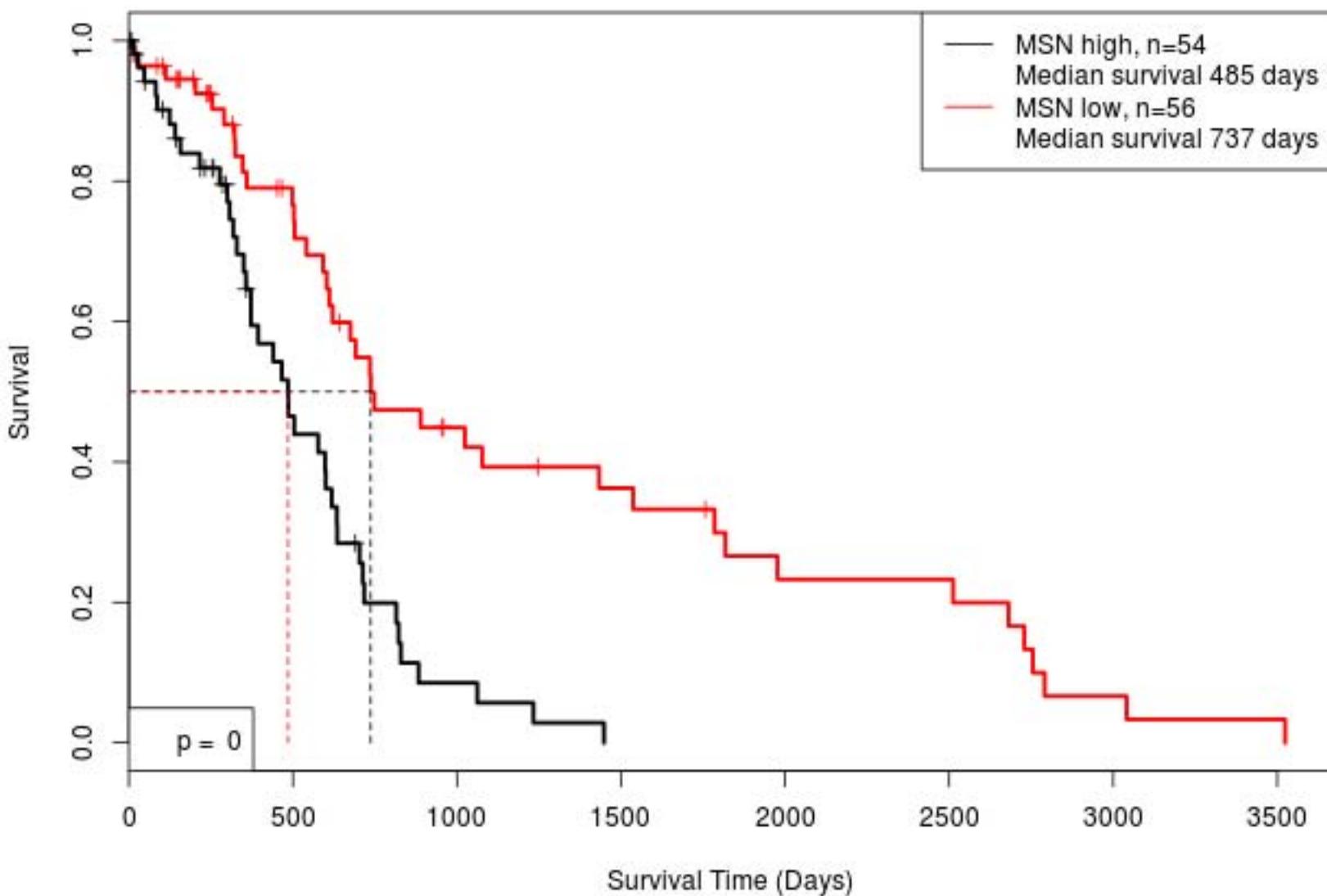


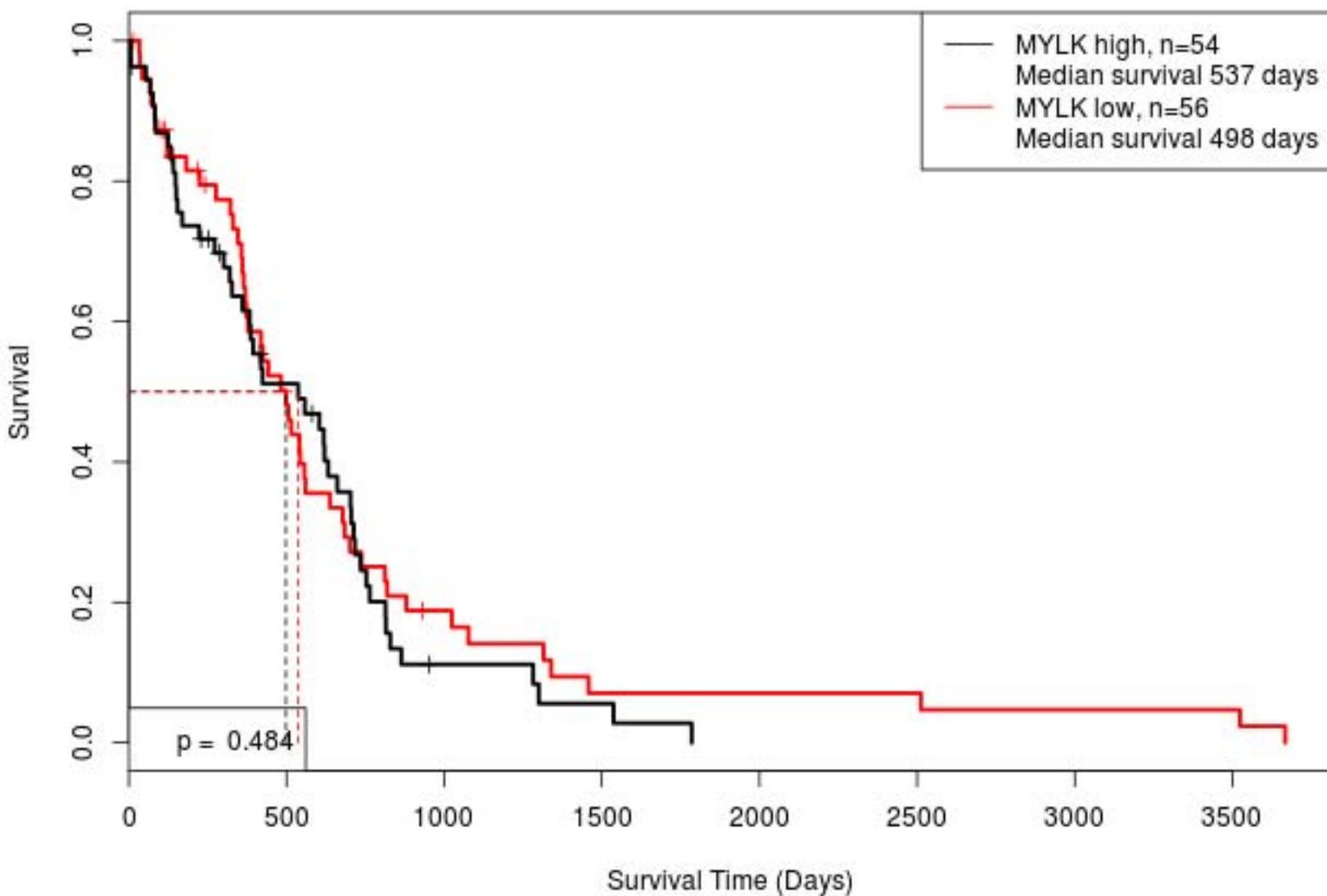


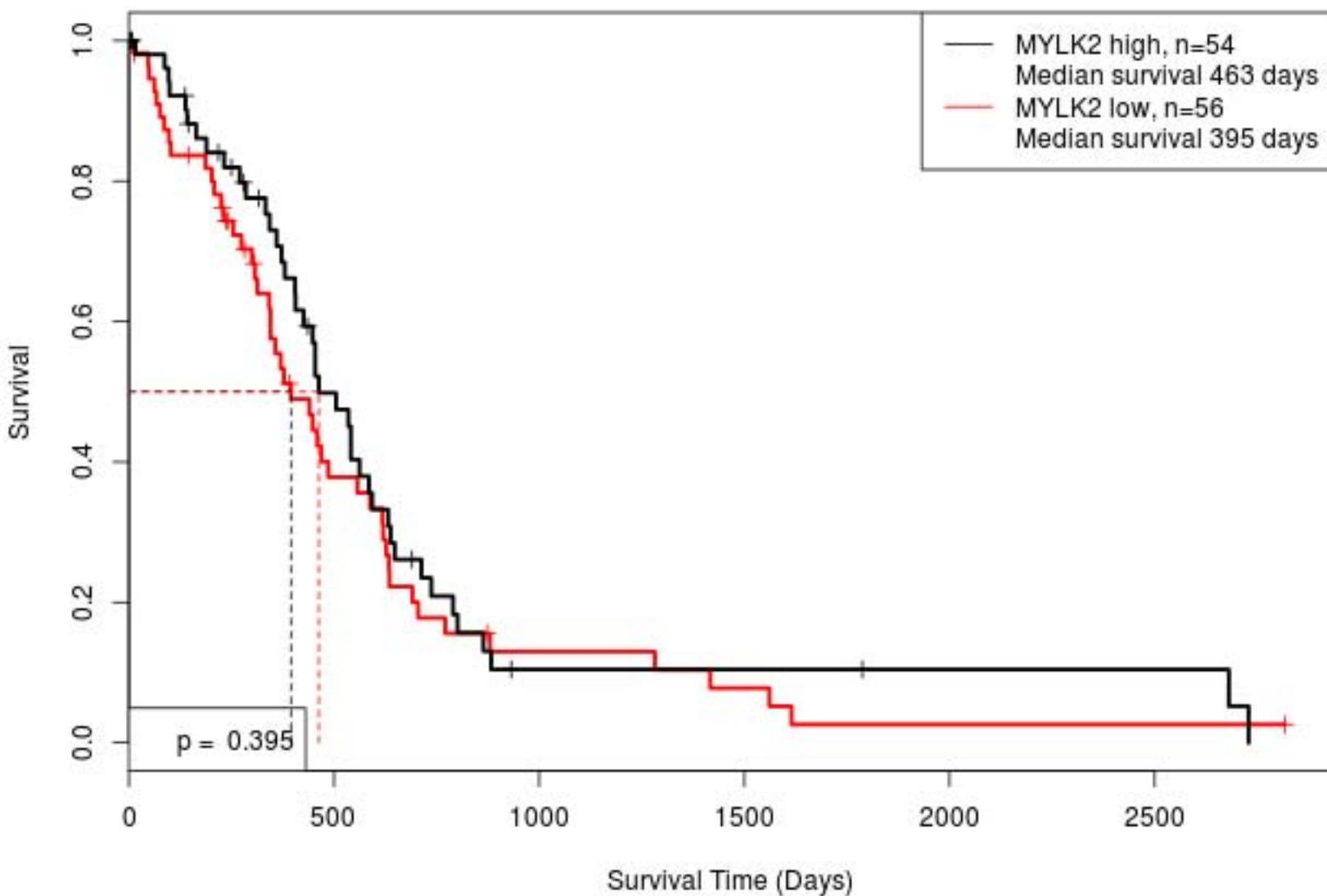


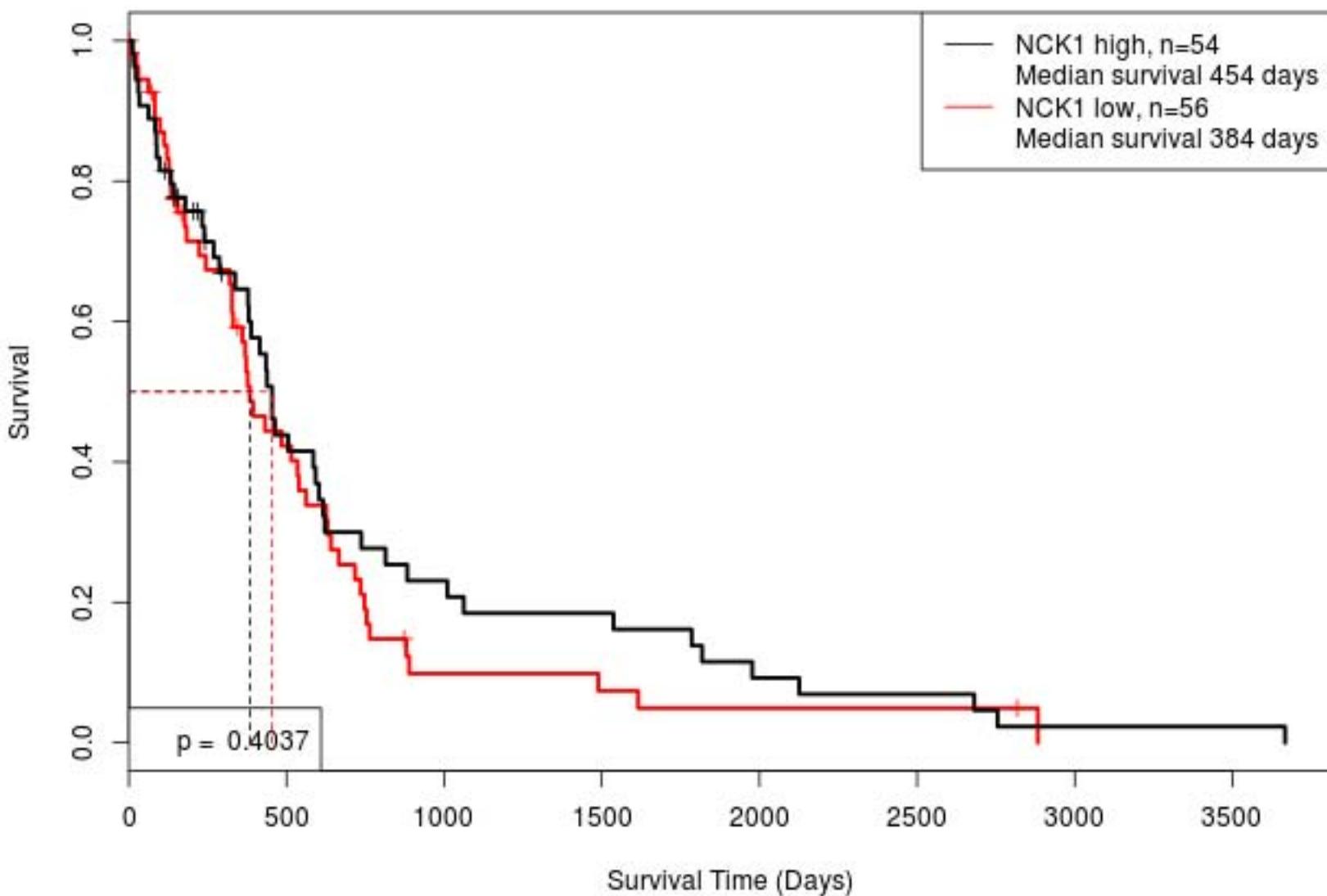


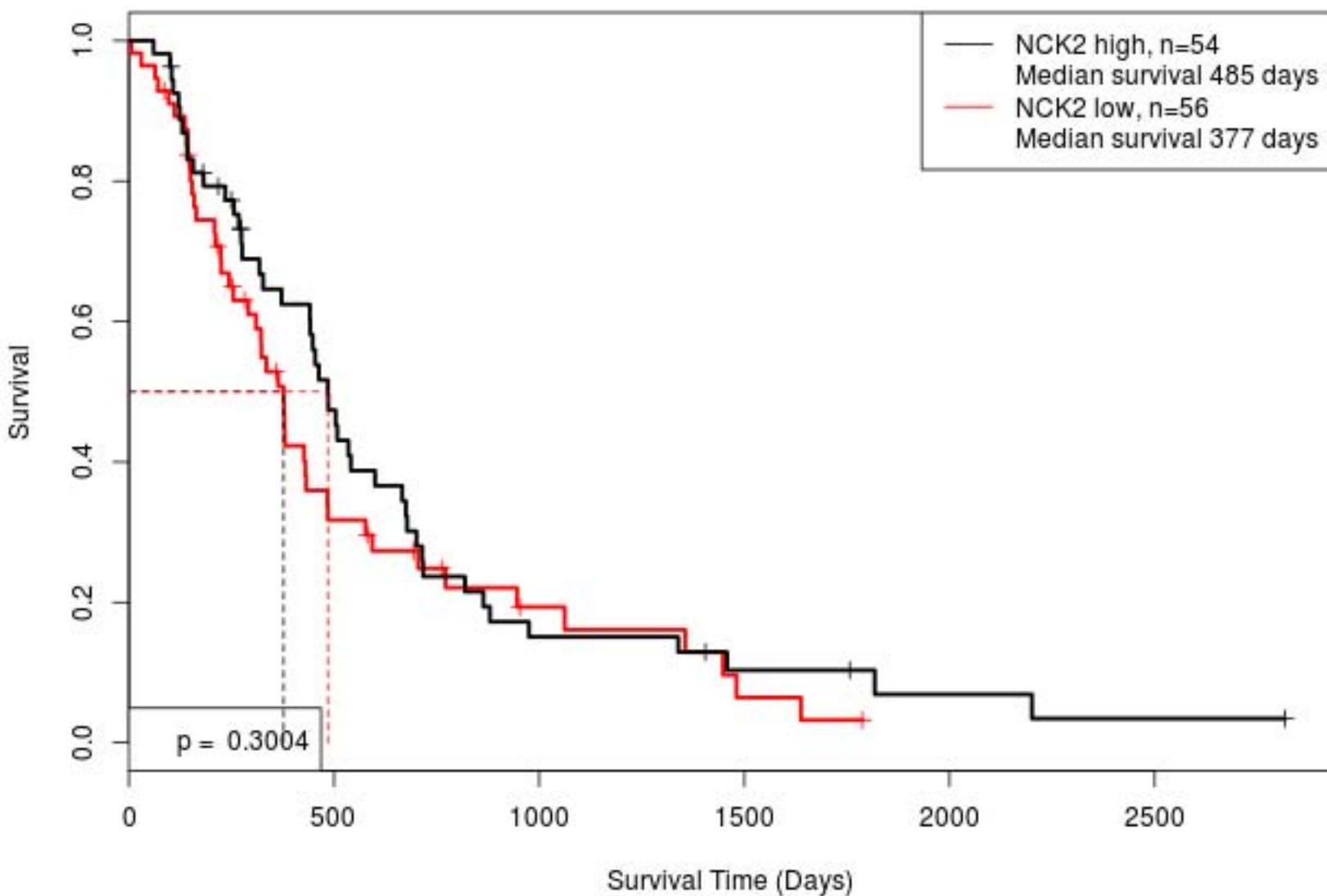


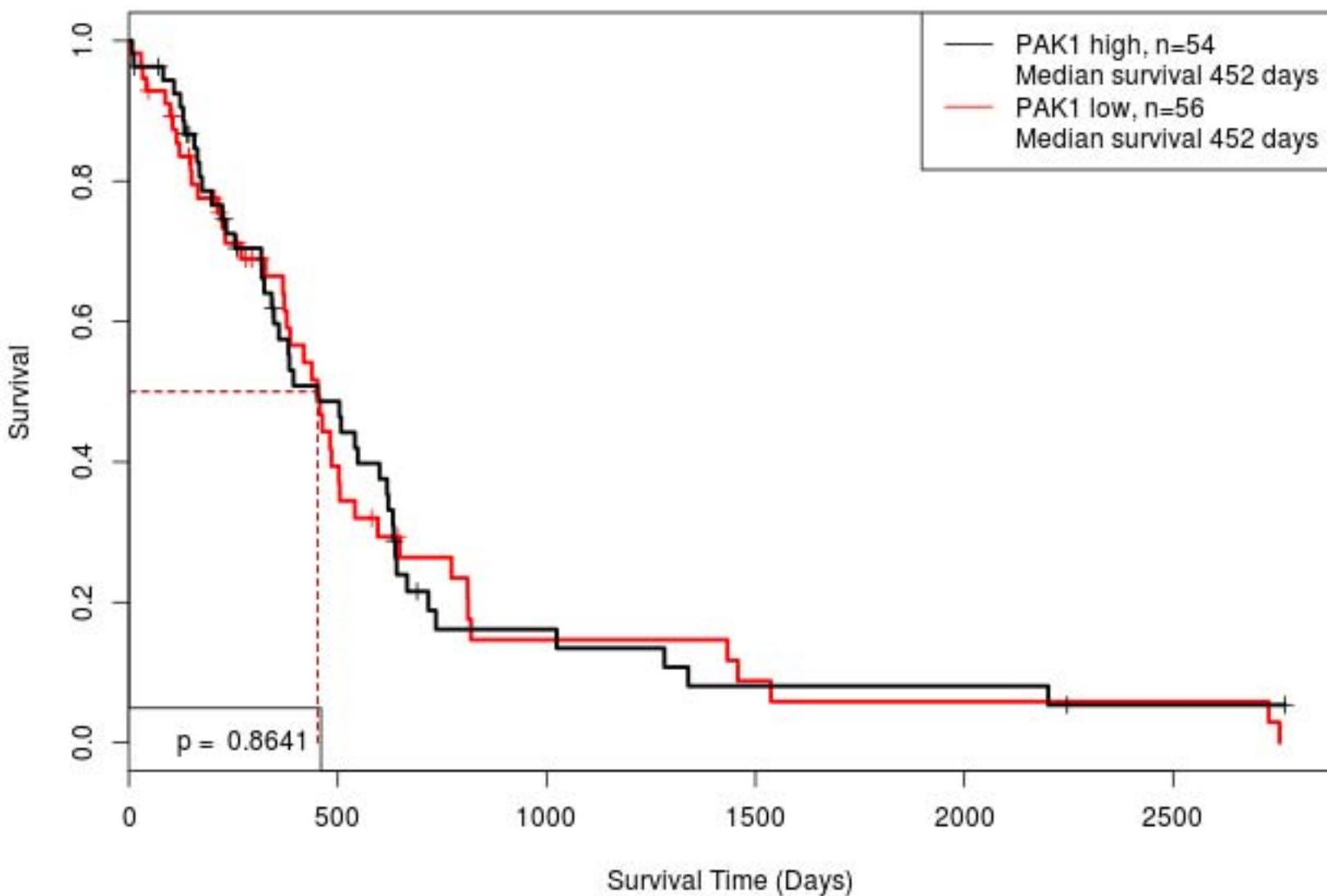


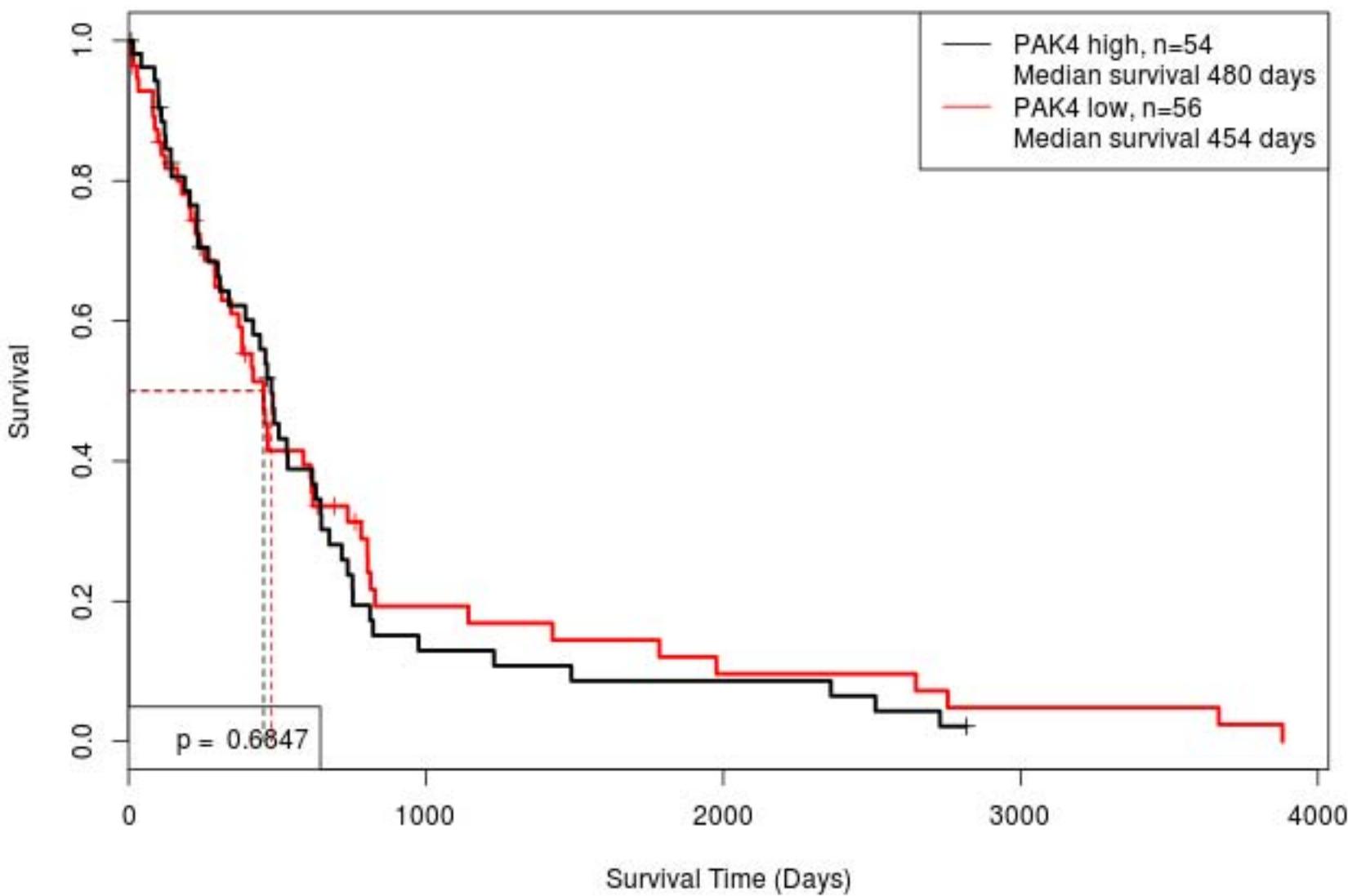


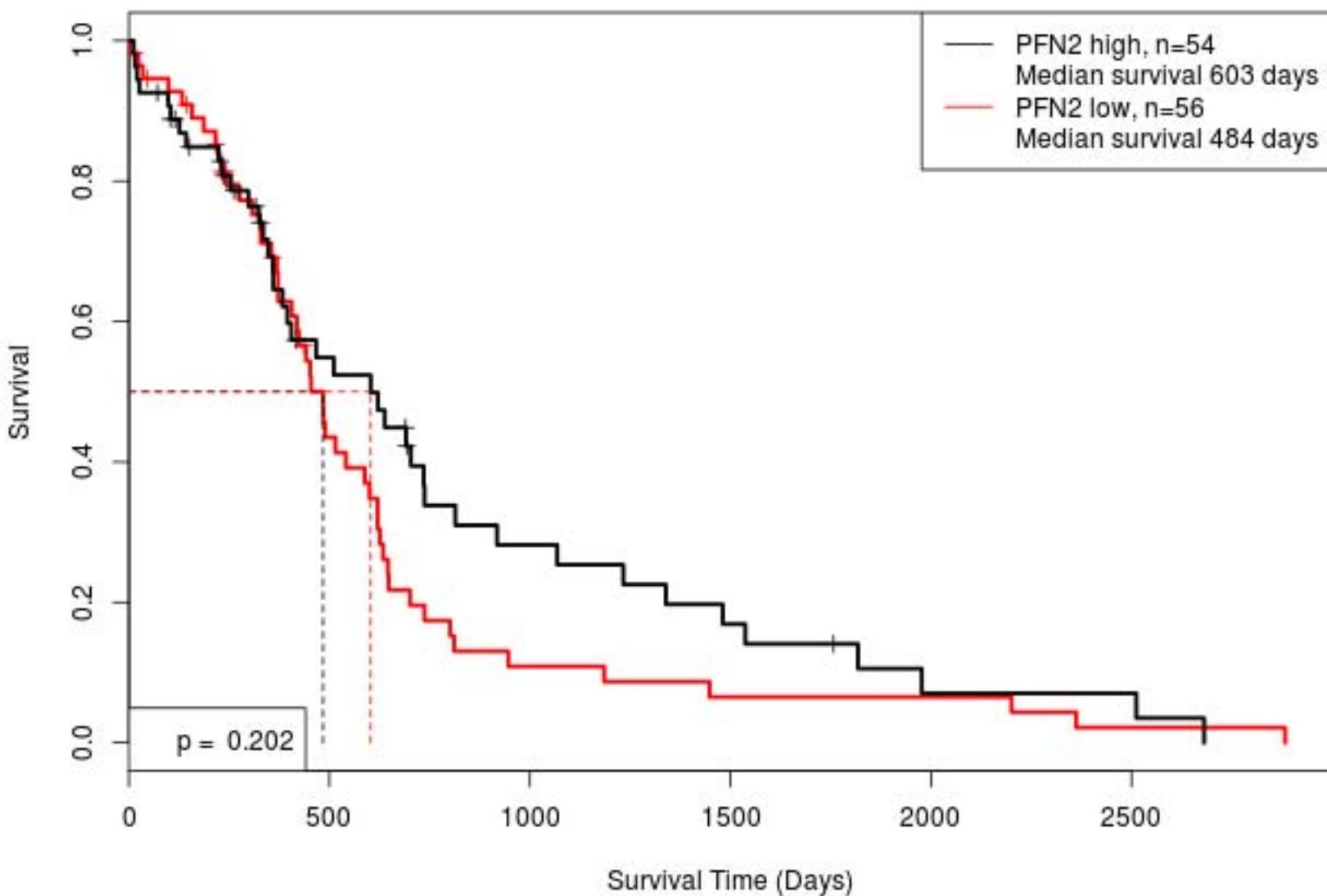


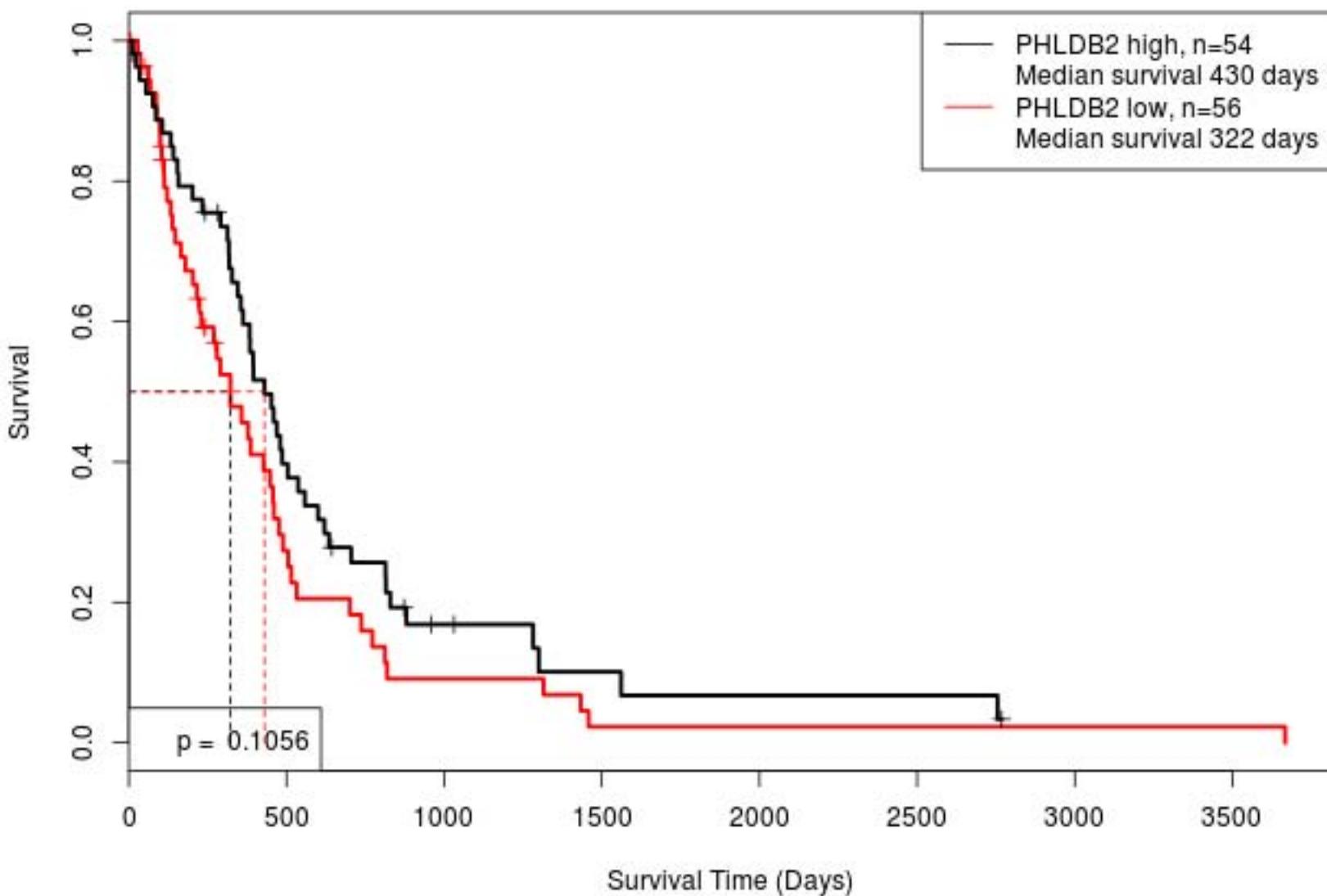


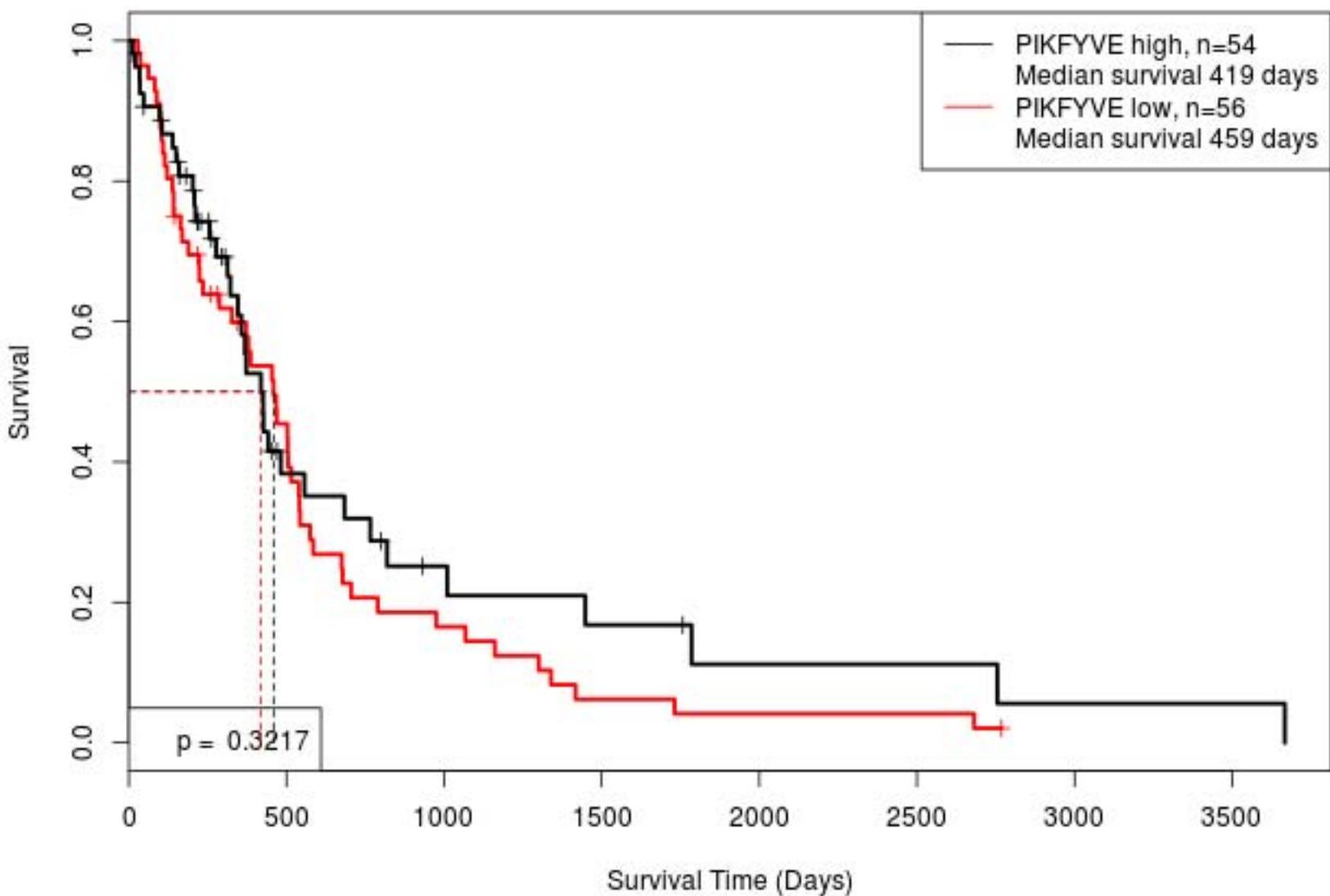


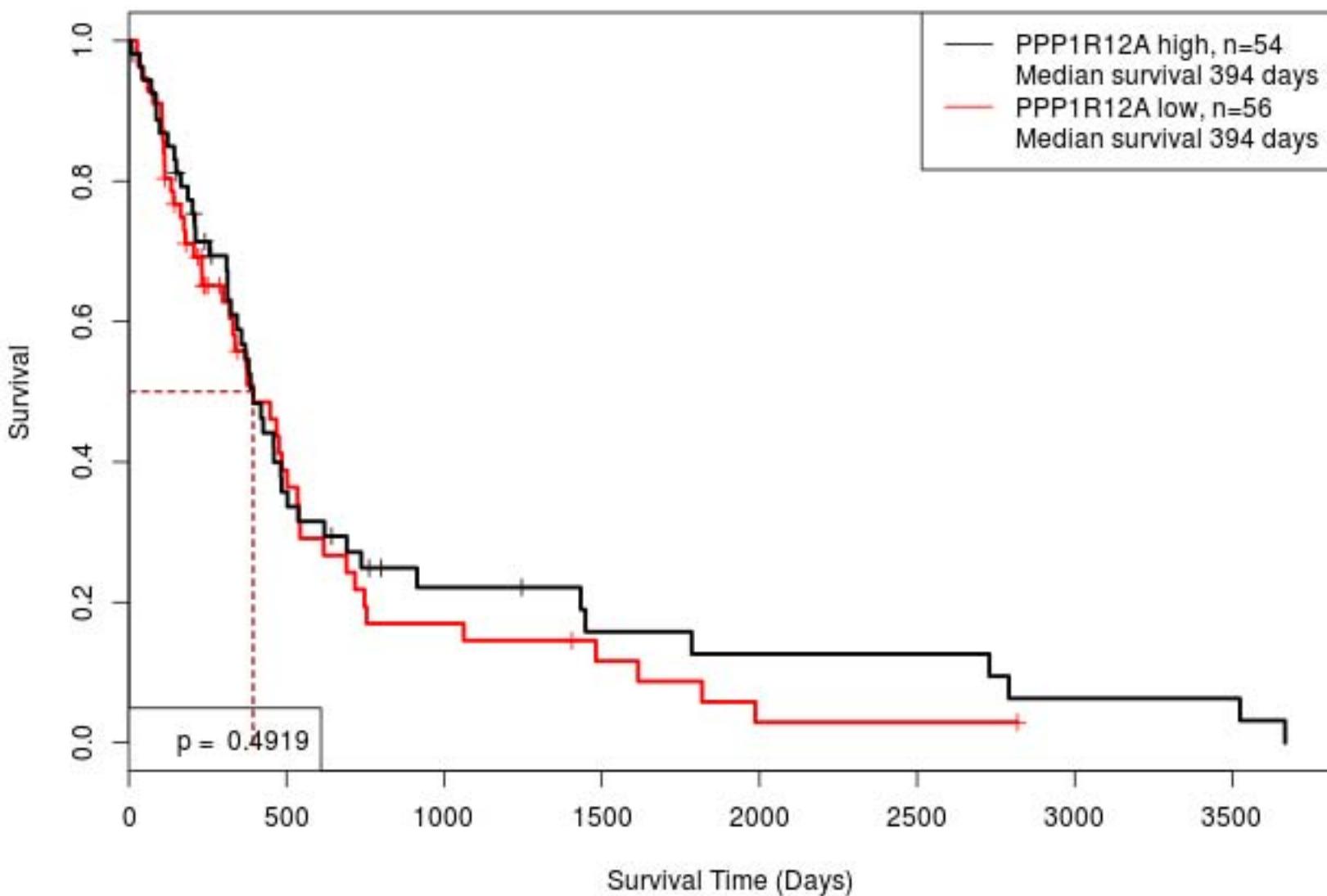


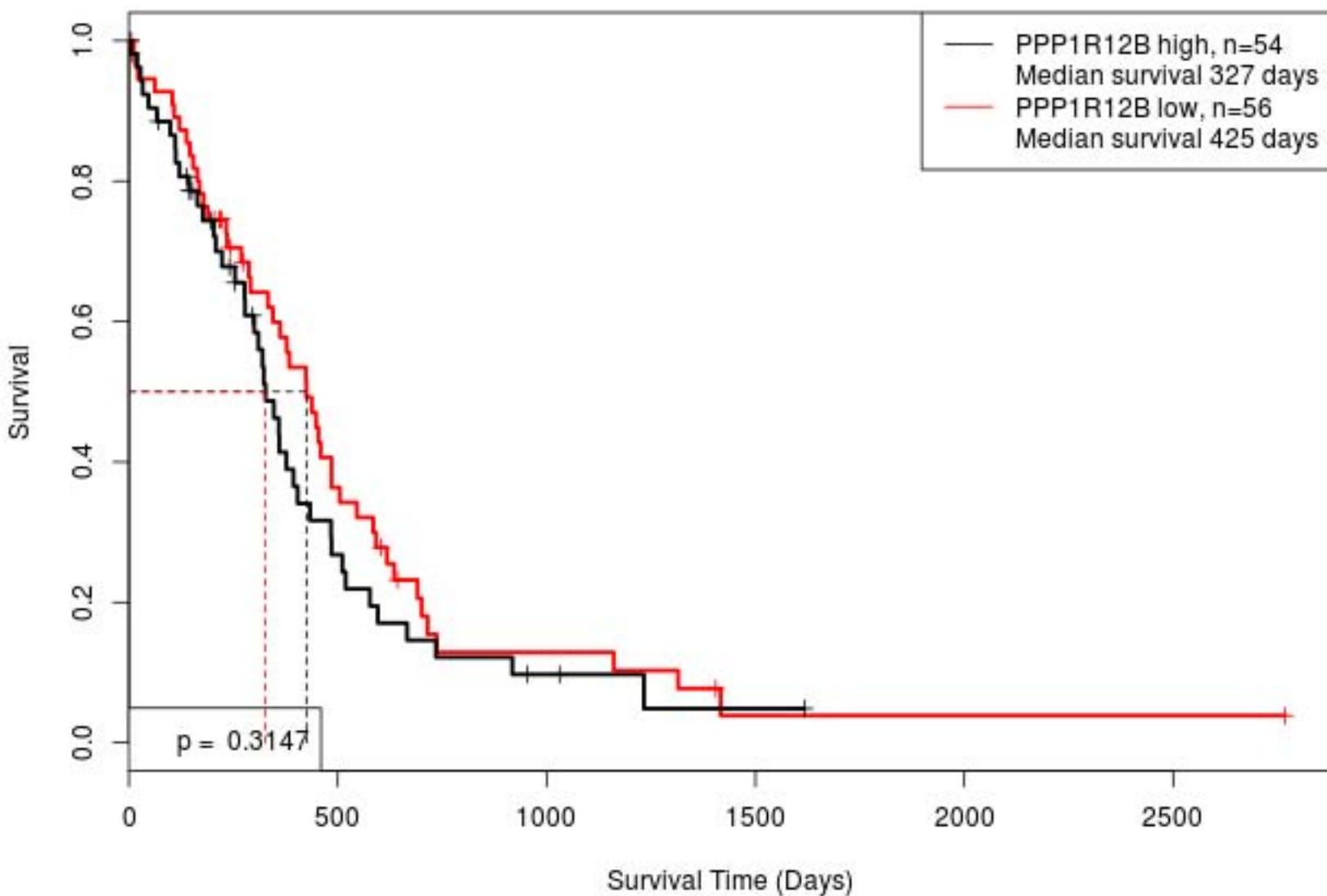


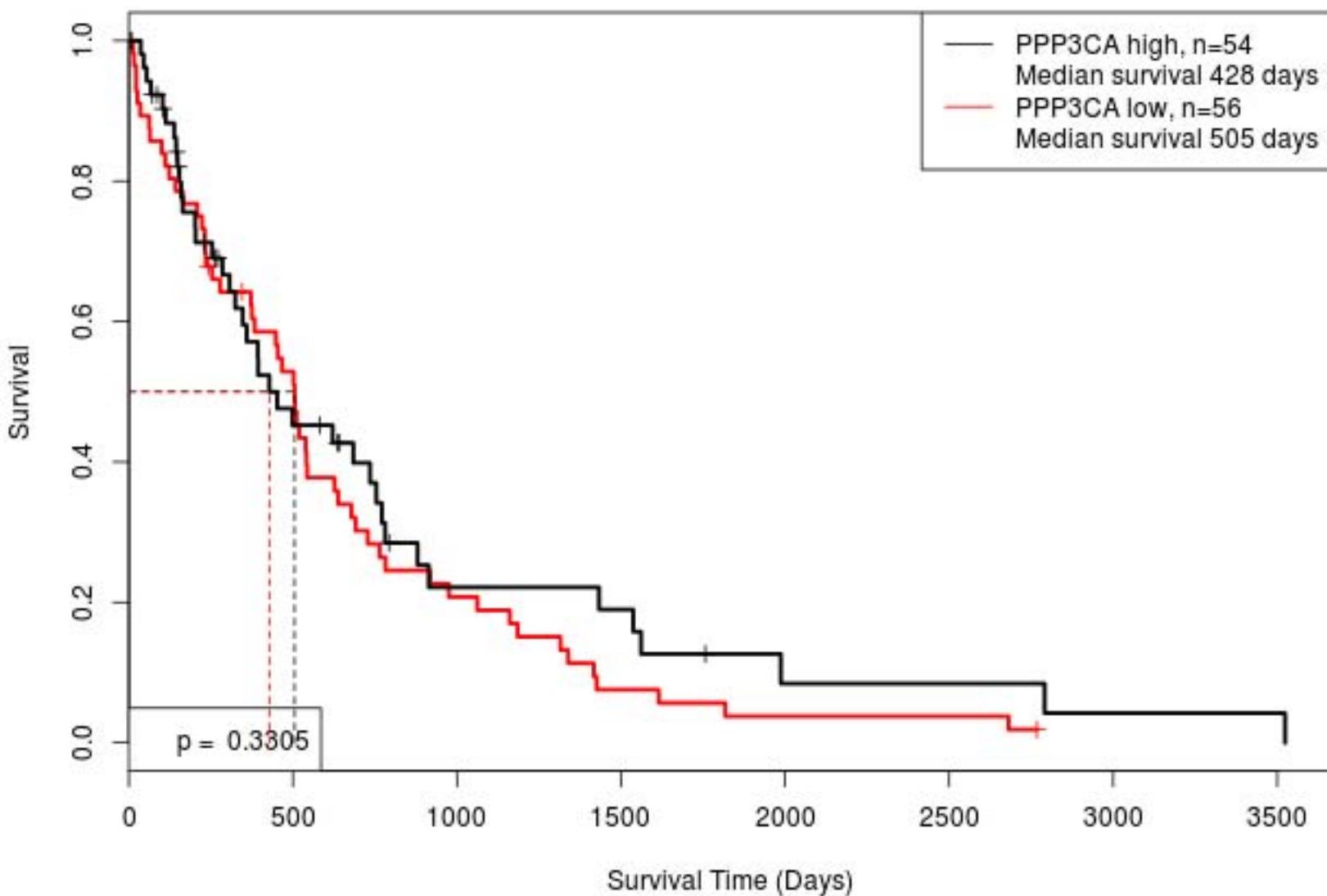


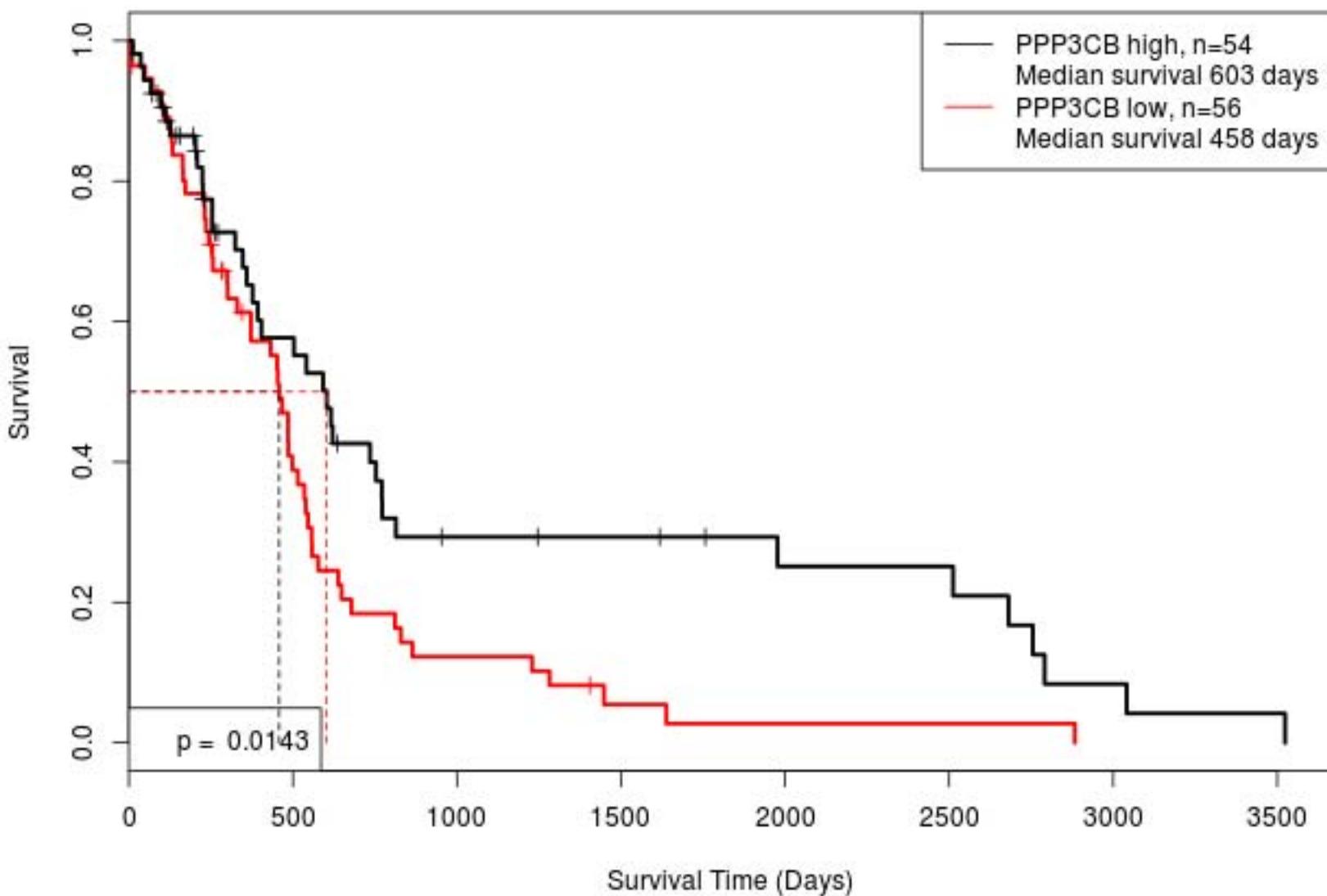


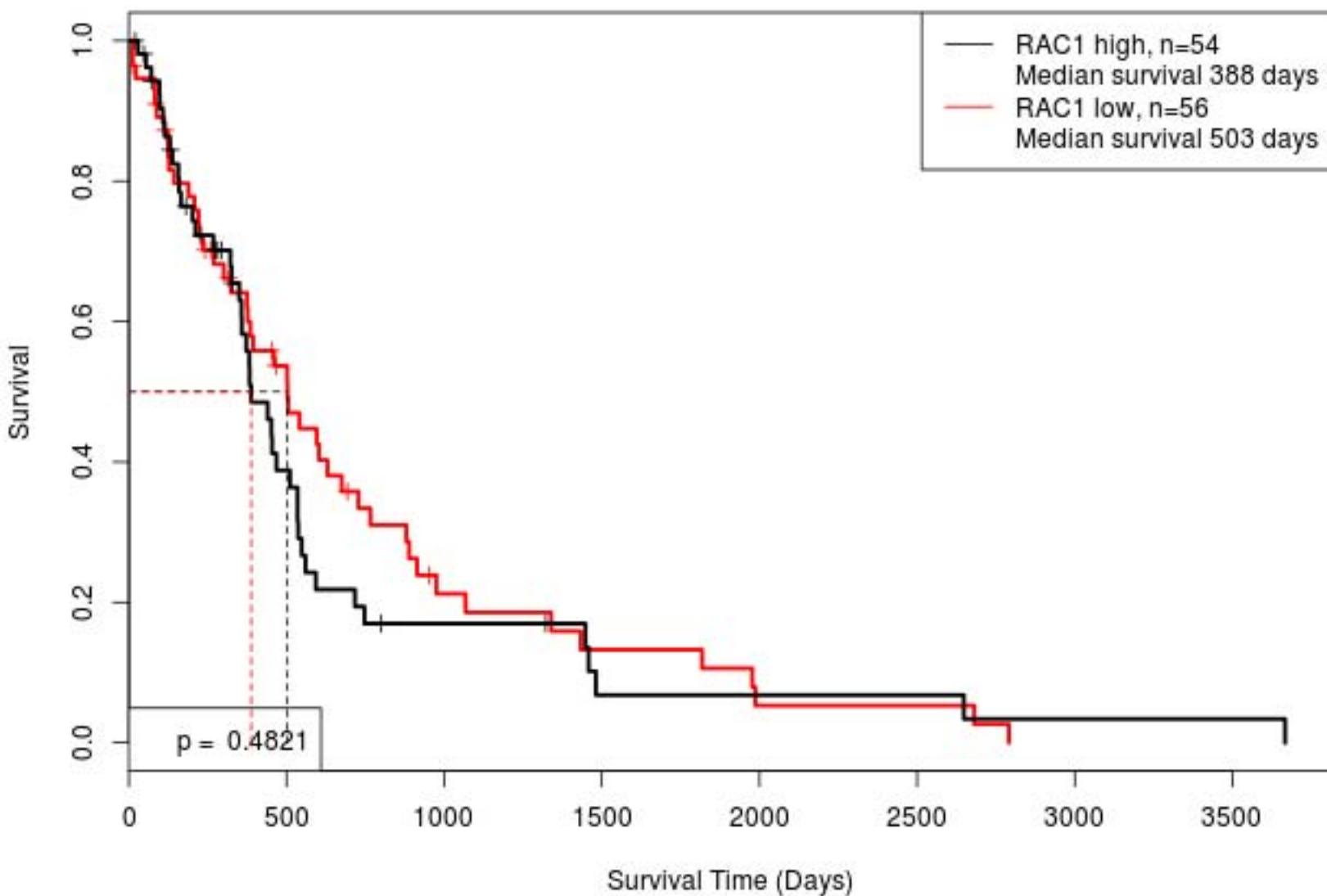


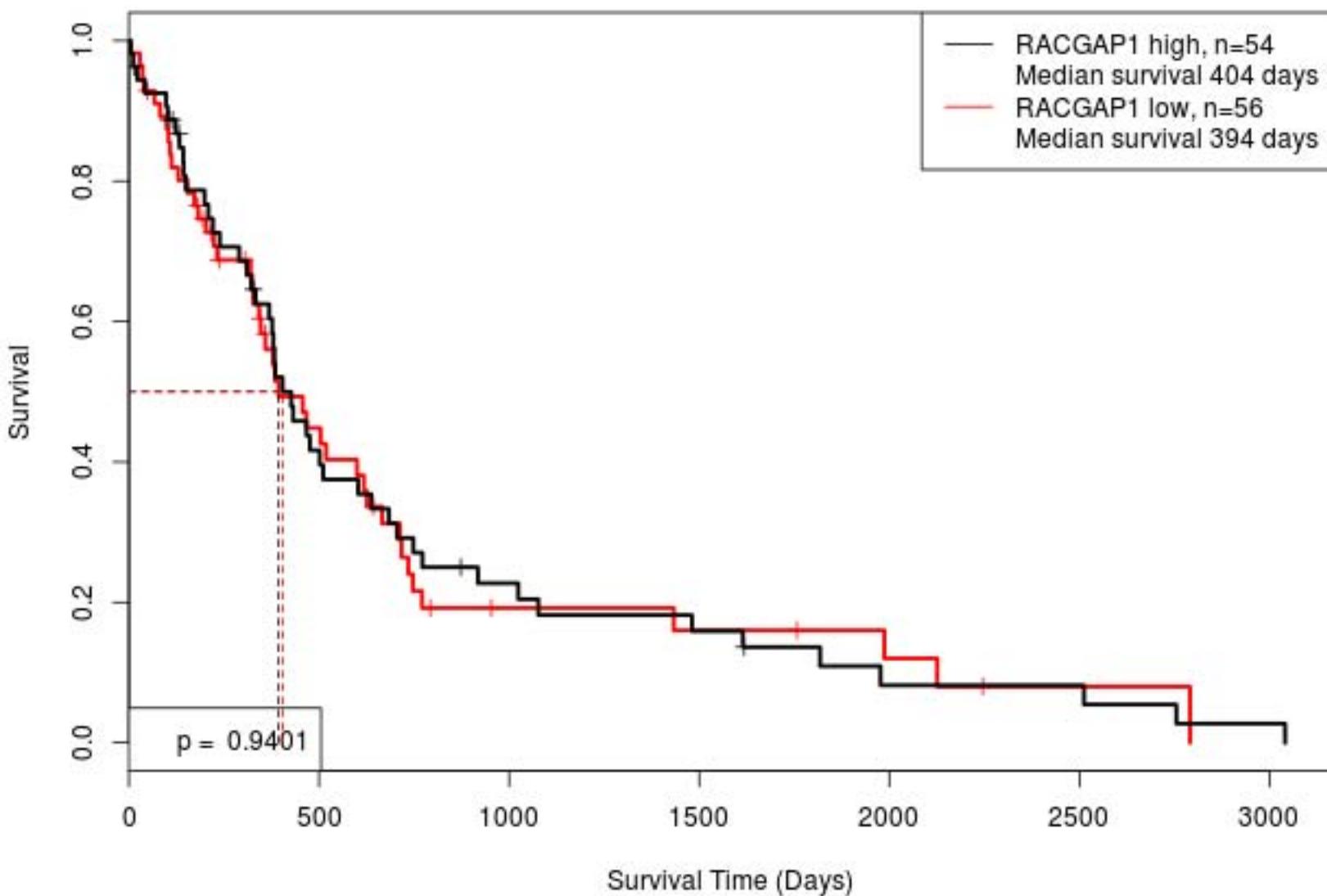


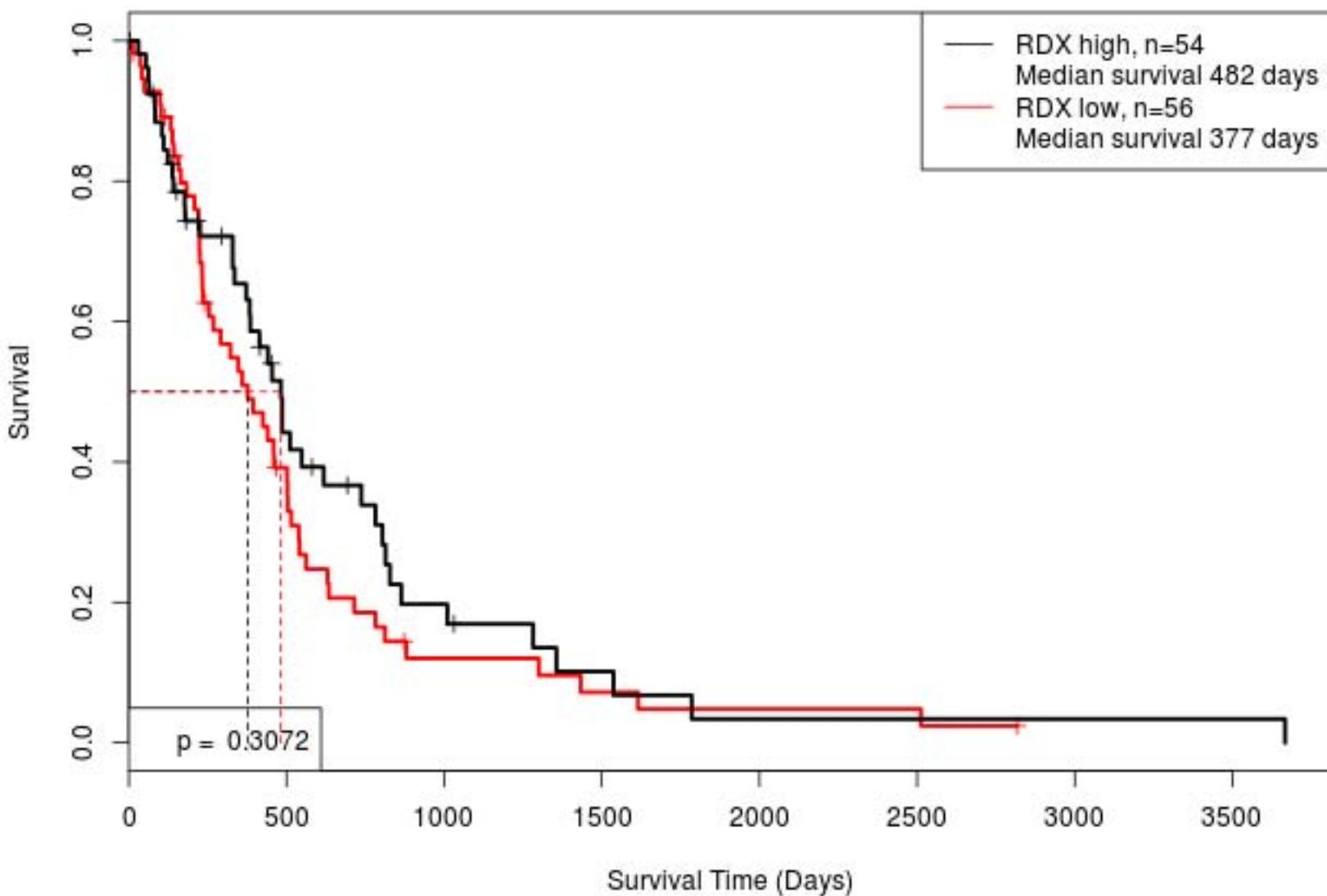


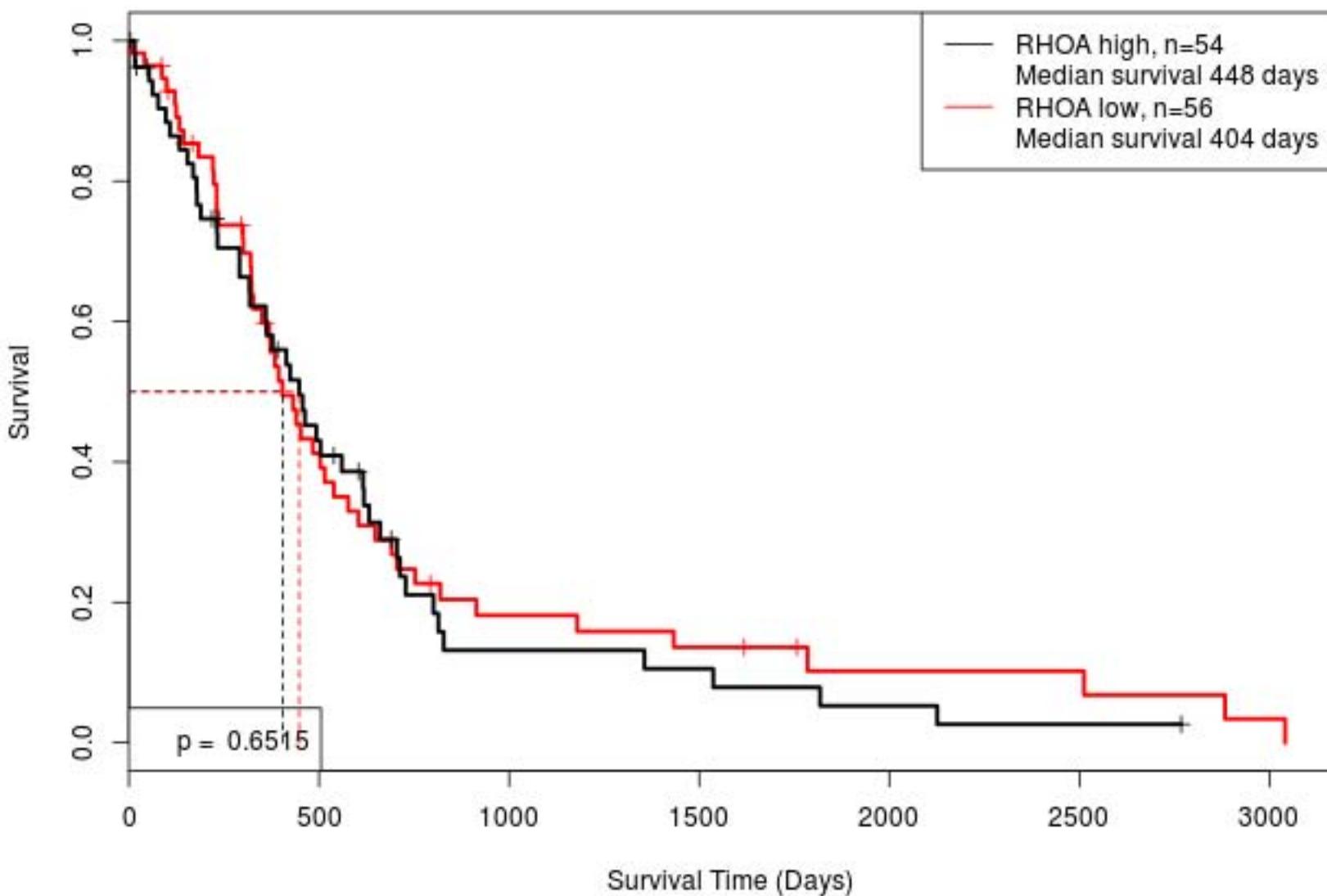


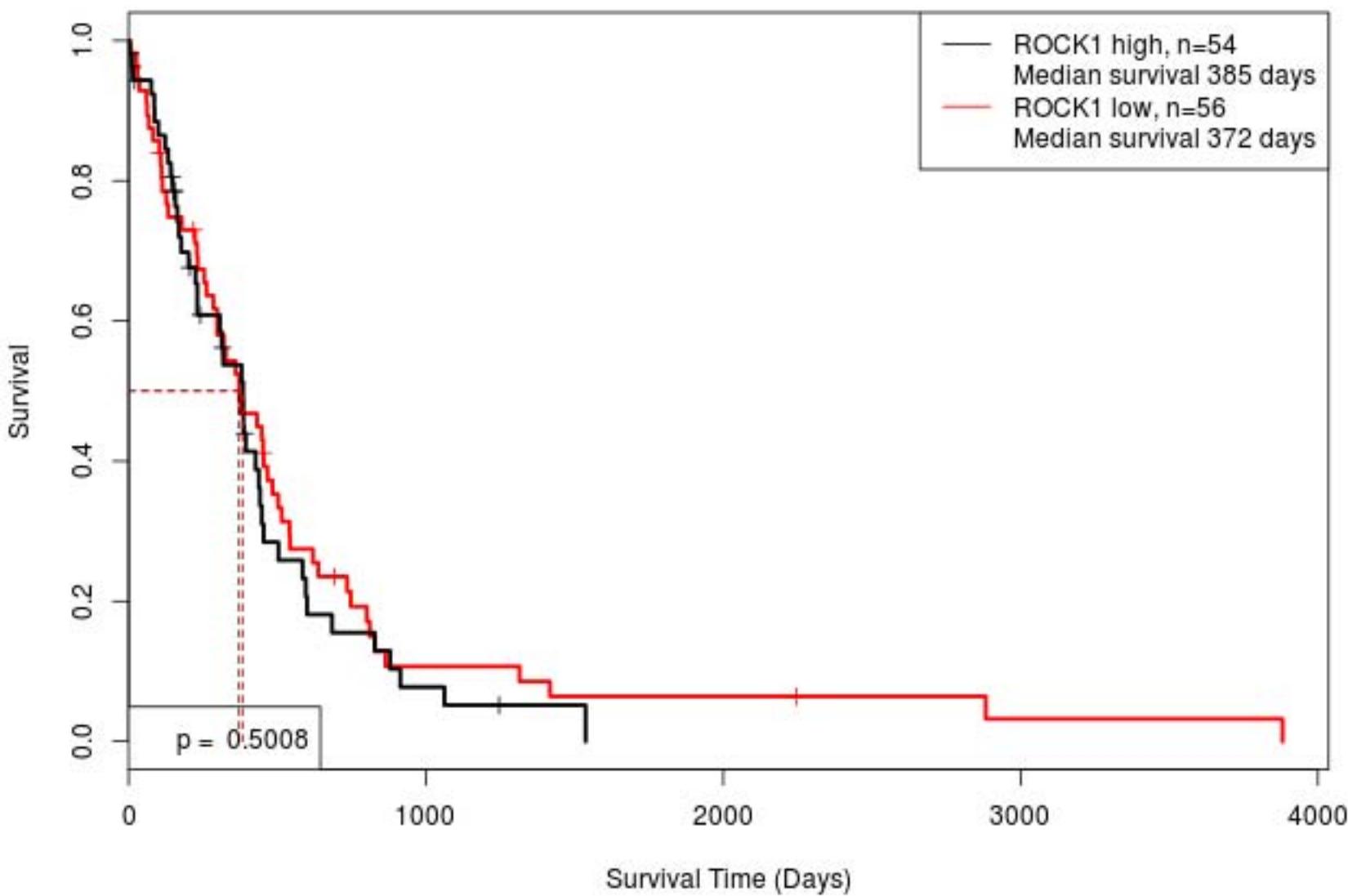


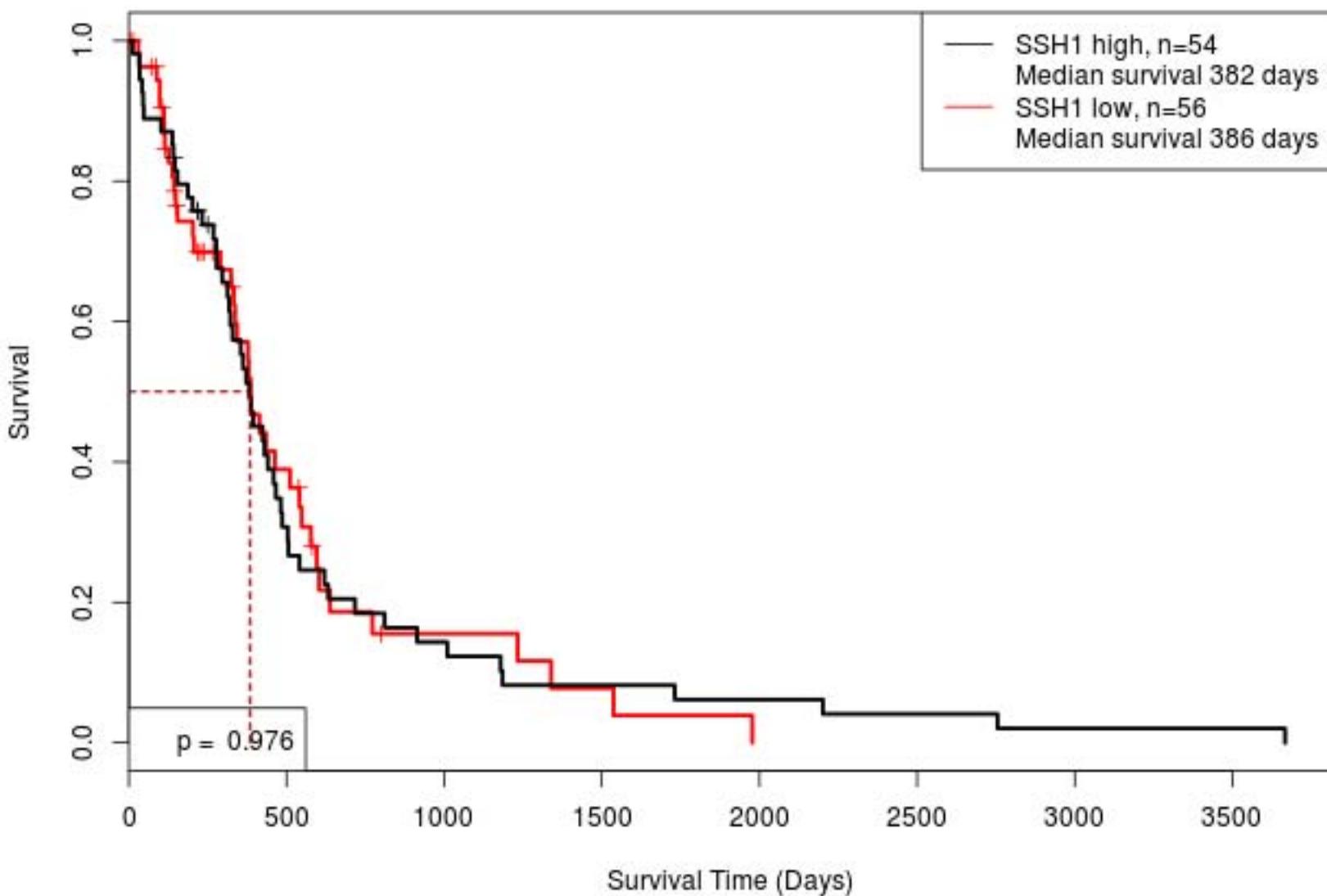


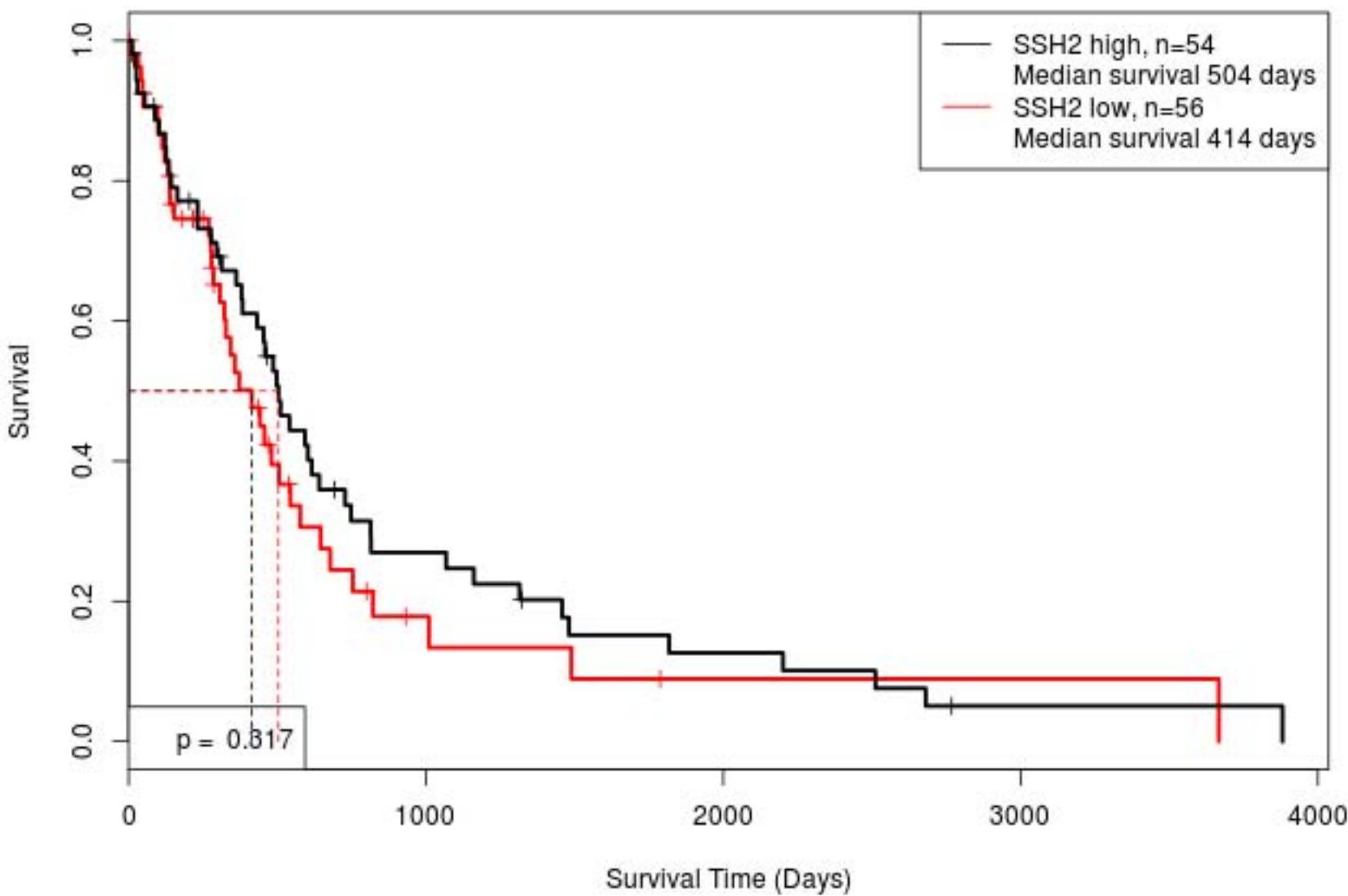


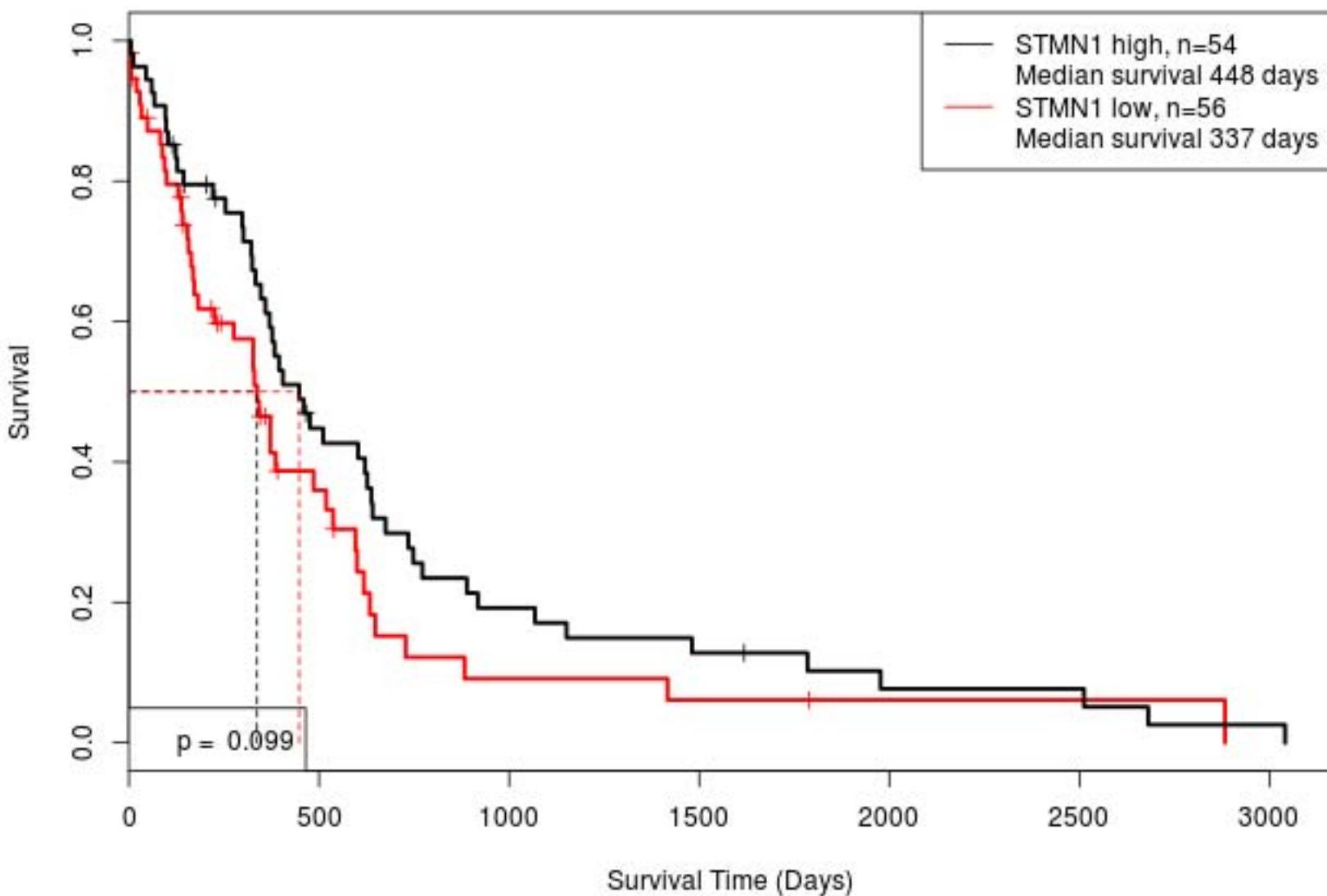


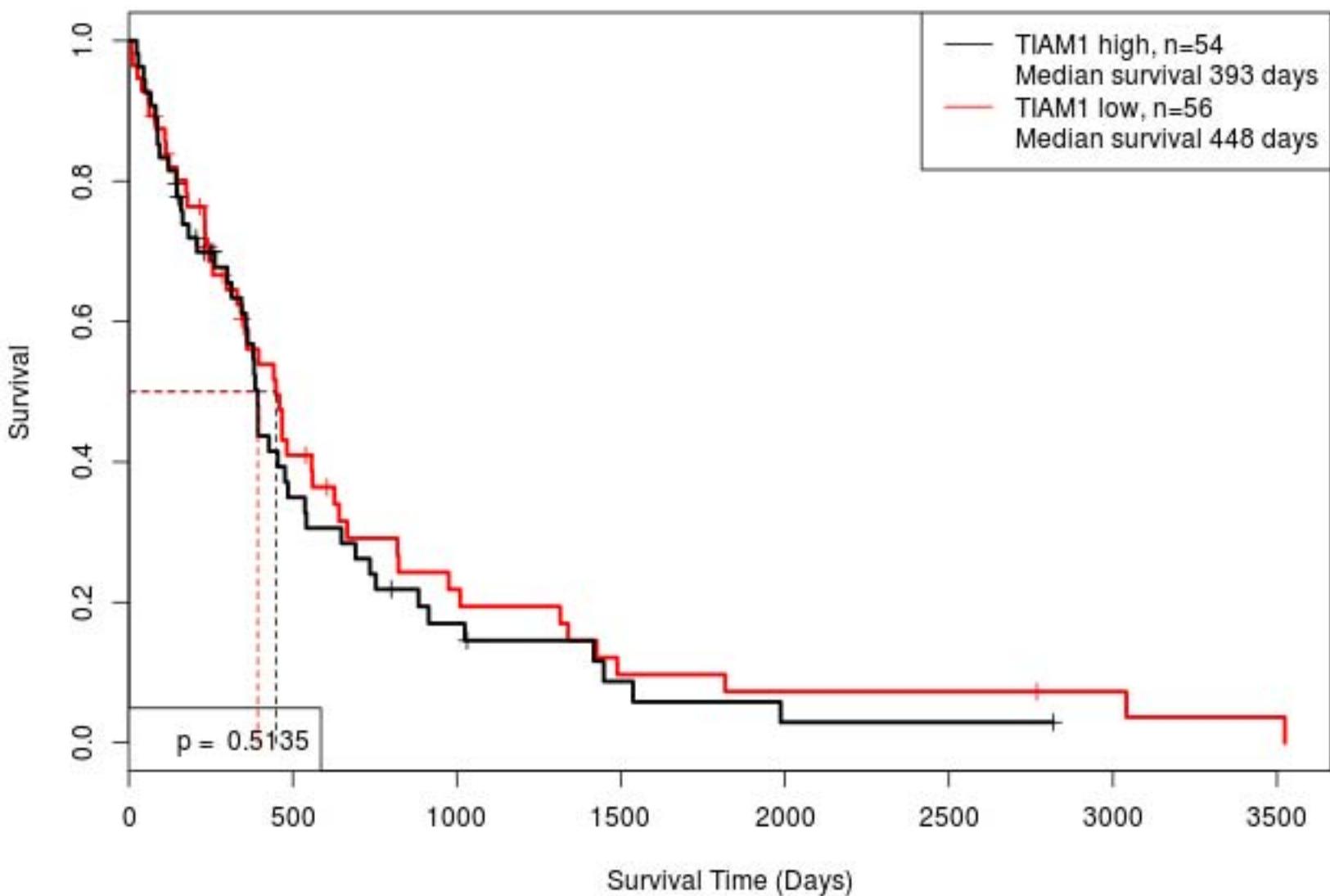


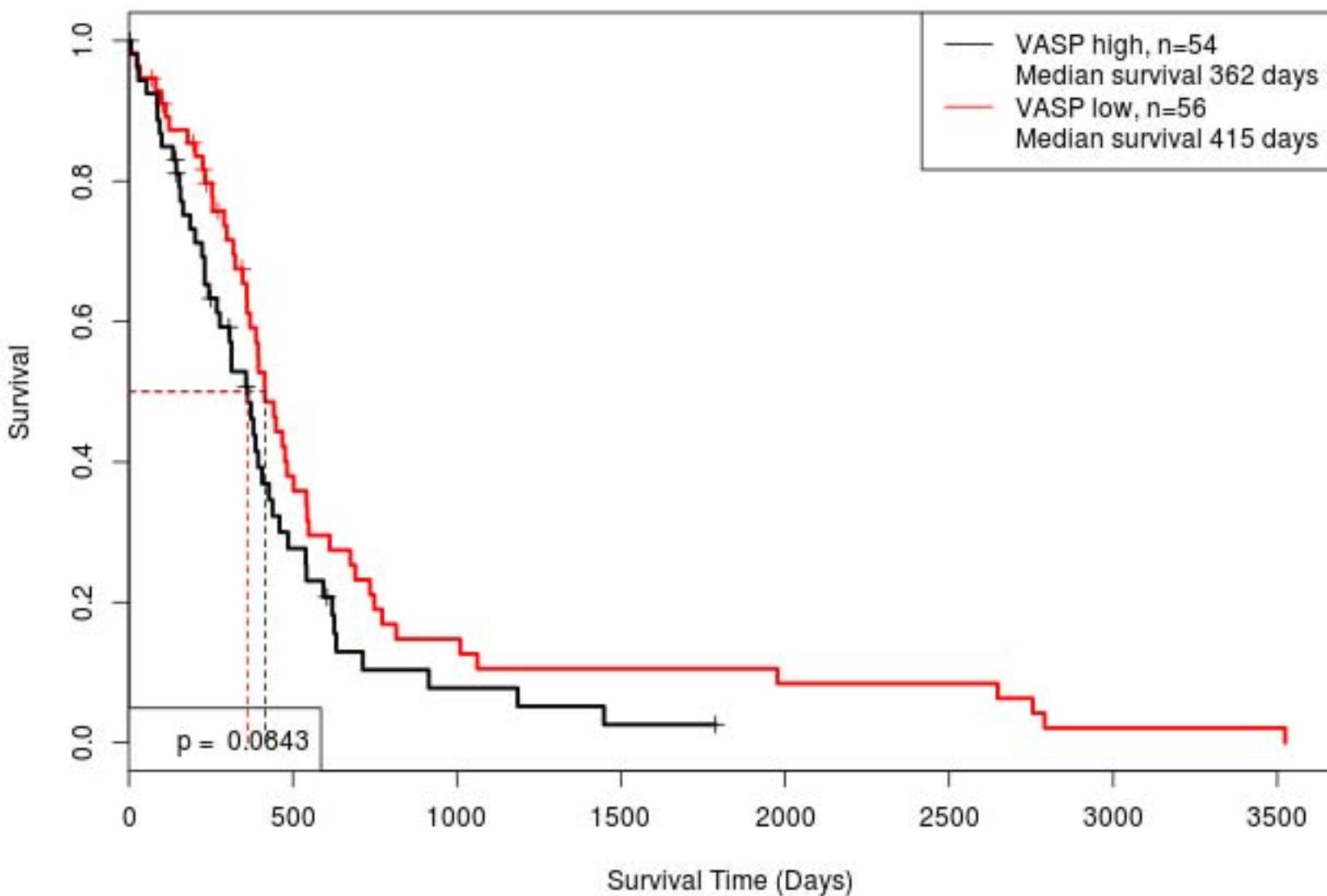


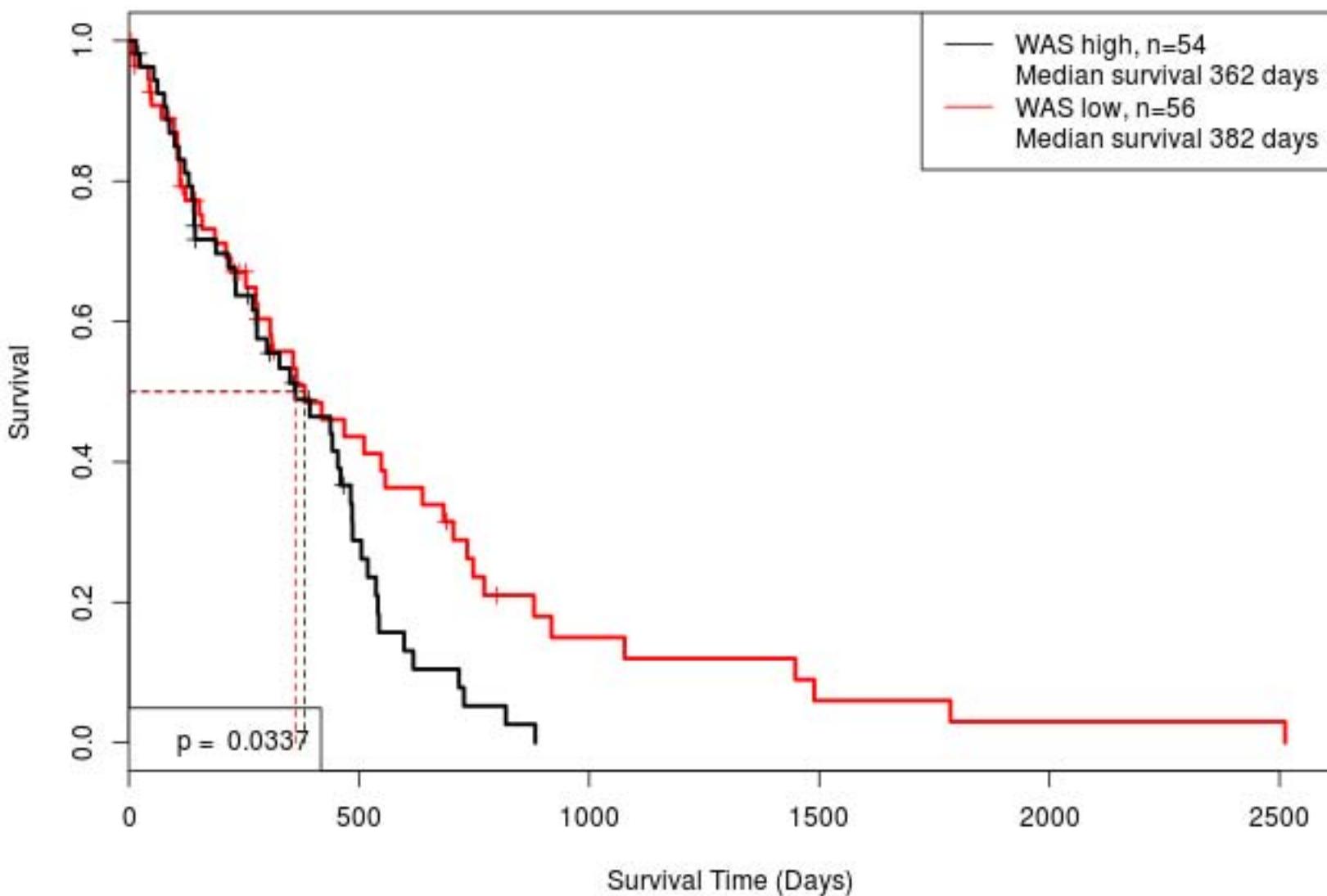


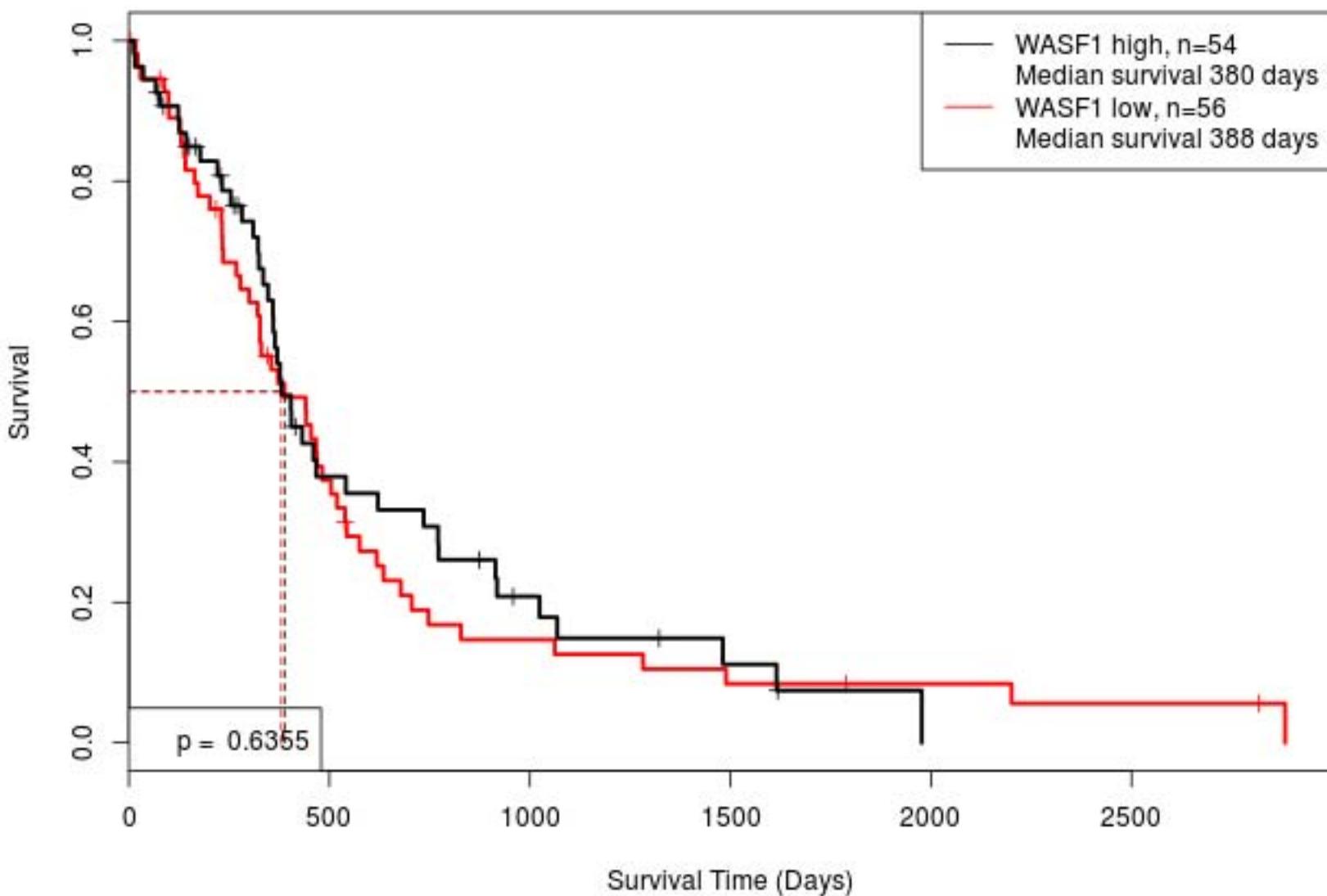


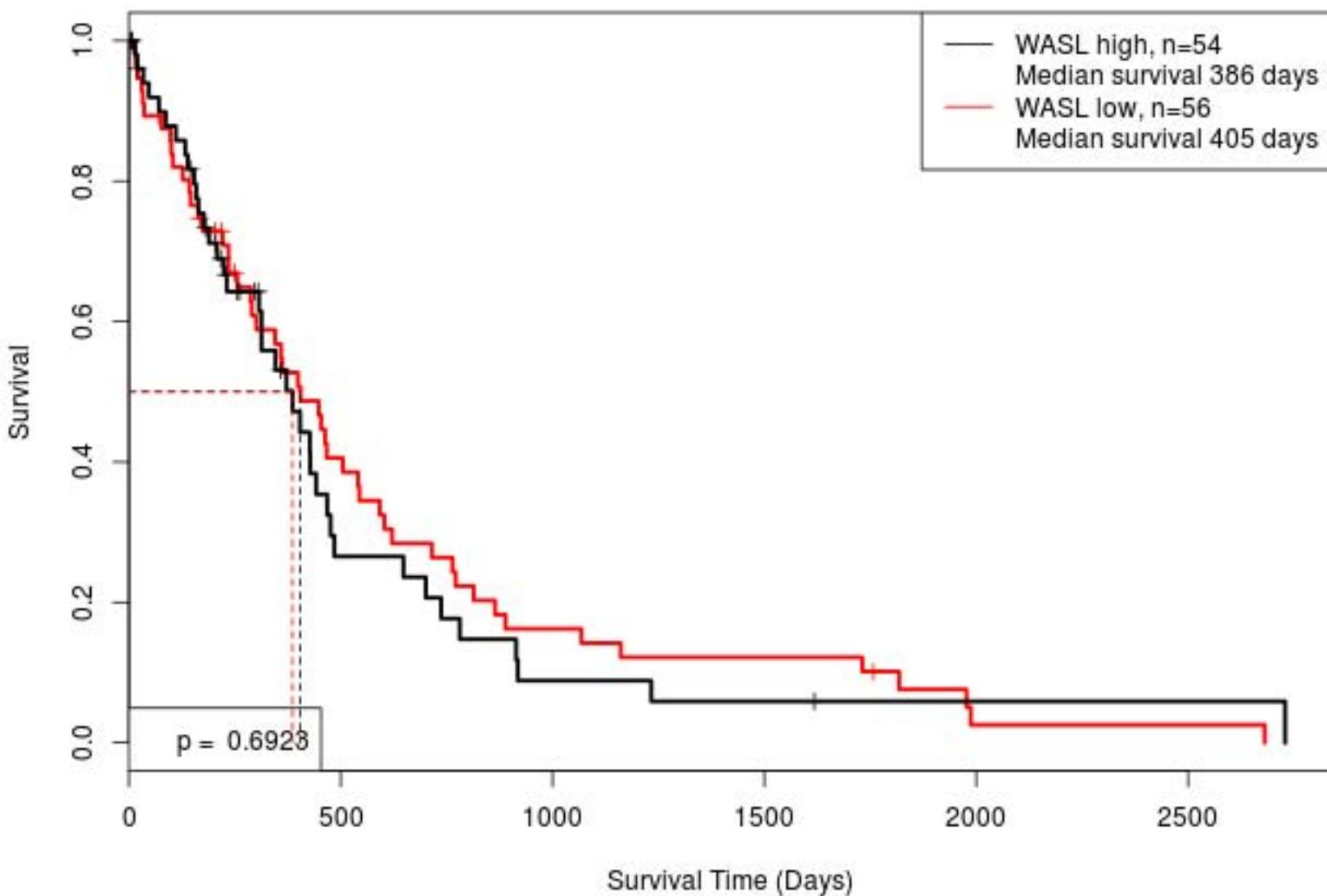






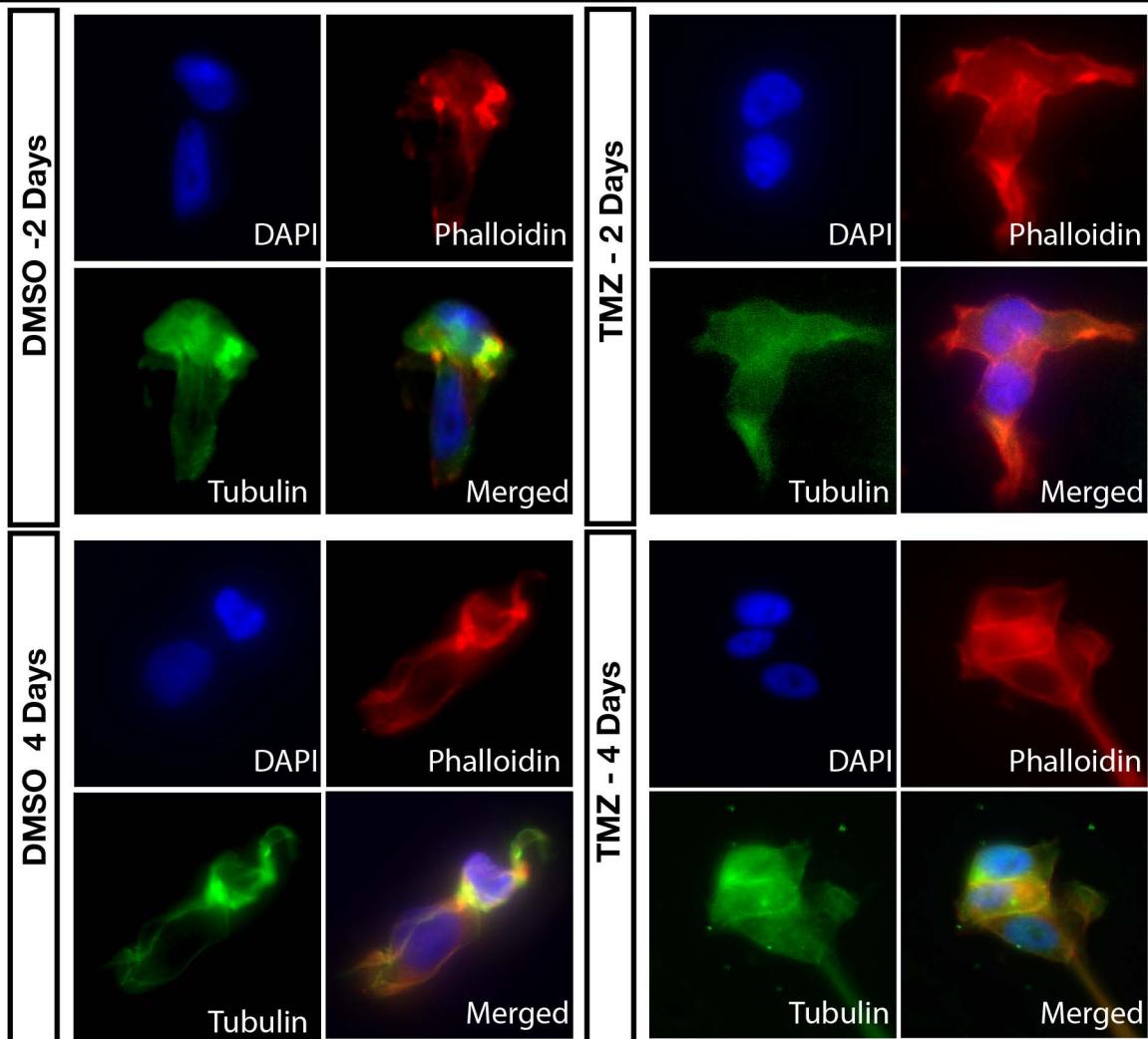
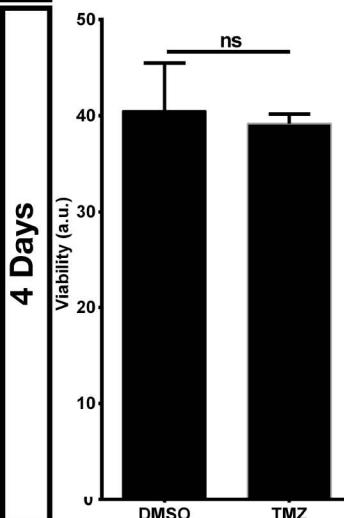
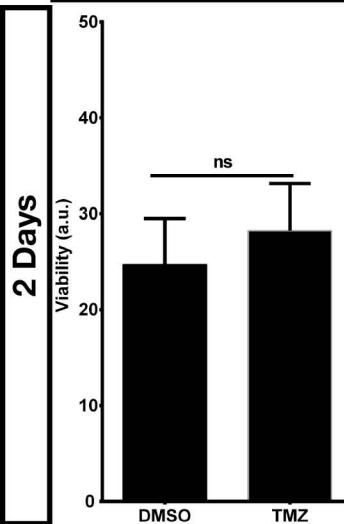






**Supplementary Figure 3.** Viability assay and immuno staining with anti-acetylated tubulin, phalloidin staining and DAPI staining of GBM cells exposed to sublethal concentration of temozolomide. Abbreviation: TMZ, temozolomide.

# Temozolomide Treatment and Cytoskeleton effect



**Supplementary Table 1.** Gene list with fold change values and statistics (p-value) for all the datasets analysed here.

**Supplementary Table 1 showing Groups, Gene name and values for dataset used in Figure 1**

Group	Subgroup	Gene	Gene Name	Fold change (Tumor vs Normal)	p-paired (Tumor vs Normal)
Actin Filaments	IP	ACTR2	ARP2 actin-related protein 2 homolog (yeast)	-1,073835449	0,455483458
		ACTR3	ARP3 actin-related protein 3 homolog (yeast)	1,504270418	0,0009155
		ARPC1B	Actin Related Protein 2/3 Complex, Subunit 1B	2,906922396	0,001863115
		ARPC2	actin related protein 2/3 complex, subunit 2. 34kDa	1,079396338	0,176365232
		ARPC3	actin related protein 2/3 complex, subunit 3. 21kDa	-1,044050354	0,643502179
		ARPC4	actin related protein 2/3 complex, subunit 4. 20kDa	1,259909509	0,046854047
		ARPC5	actin related protein 2/3 complex, subunit 5. 16kDa	1,409263608	0,00497167
		CALD1	Caldesmon 1	3,205977129	1,40935E-05
		CDC42EP3	CDC42 Effector Protein (Rho GTPase Binding) 3	-1,453285561	0,008479265
		CFL1	cofilin 1 (non-muscle)	1,645596696	0,023982924
		CYFIP1	cytoplasmic FMR1 interacting protein 1	1,404888717	0,025109081
		CYFIP2	cytoplasmic FMR1 interacting protein 2	-4,810260509	1,06932E-09
		DIAPH1	diaphanous-related formin 1	1,43994947	0,001519606
		DSTN	destrin (actin depolymerizing factor)	-1,857782582	5,36051E-07
		EZR	ezrin	N/A	N/A
		FSCN2	fascin homolog 2. actin-bundling protein. retinal (Strongylocentrotus purpuratus)	N/A	N/A
		GSN	gelsolin	1,112789136	0,709080846
		IQGAP2	IQ Motif Containing GTPase Activating Protein 2	2,74804037	7,64335E-05
		MACF1	Microtubule-Actin Crosslinking Factor 1	-1,167367445	0,259876985
		PFN2	profilin 2	-2,16349467	0,000129815
		RDX	radixin	2,764613092	0,000635606
		SSH1	slingshot protein phosphatase 1	1,029327282	0,650872594
		SSH2	slingshot protein phosphatase 2	1,169892989	0,277768942
		WASF1	WAS protein family, member 1	-4,02396288	1,88158E-06
		WASL	Wiskott-Aldrich syndrome-like	-1,068542555	0,501791705
		VASP	vasodilator-stimulated phosphoprotein	1,525254084	0,002909487
	OR	ARAP1	ArfGAP with RhoGAP domain. ankyrin repeat and PH domain 1	N/A	N/A
		ARFIP2	ADP-ribosylation factor interacting protein 2	1,333546786	0,017886494
		ARHGDI1	Rho GDP Dissociation Inhibitor (GDI) Beta	N/A	N/A
		ARHGEF11	Rho guanine nucleotide exchange factor (GEF) 11	-1,335574534	0,044884968
		ARPC4	actin related protein 2/3 complex, subunit 4. 20kDa	1,259909509	0,046854047
		CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	2,513877779	7,90035E-05
		CDC42	cell division cycle 42	-1,698341557	1,81298E-05
		CDC42BP1A	CDC42 binding protein kinase alpha (DMPK-like)	-1,432138592	0,000719385
		CFL1	cofilin 1 (non-muscle)	1,645596696	0,023982924
		CRK	v-crk sarcoma virus CT10 oncogene homolog (avian)	1,284086367	0,014514228
		DIAPH1	diaphanous-related formin 1	1,43994947	0,001519606
		DSTN	destrin (actin depolymerizing factor)	-1,857782582	5,36051E-07
		EZR	ezrin	N/A	N/A
		FSCN2	fascin homolog 2. actin-bundling protein. retinal (Strongylocentrotus purpuratus)	N/A	N/A
		GSN	gelsolin	1,112789136	0,709080846
		IQGAP1	IQ motif containing GTPase activating protein 1	2,74804037	7,64335E-05
		LIMK1	LIM domain kinase 1	-2,446843602	2,62139E-05
		LIMK2	LIM domain kinase 2	-1,028411463	0,761874097
		NCK1	NCK adaptor protein 1	1,618789345	0,000479158
		PFN2	profilin 2	-2,16349467	0,000129815
		RDX	radixin	2,764613092	0,000635606
		RHOA	ras homolog family member A	1,236798655	0,100369469
		ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,493960786	3,52551E-06
		SSH1	slingshot protein phosphatase 1	1,029327282	0,650872594
		SSH2	slingshot protein phosphatase 2	1,169892989	0,277768942
	P-D	ACTR3	ARP3 actin-related protein 3 homolog (yeast)	1,504270418	0,0009155
		ARHGAP6	Rho GTPase activating protein 6	-1,133600022	0,437233372
		ARPC1B	actin related protein 2/3 complex, subunit 1B. 34kDa	2,906922396	0,001863115
		ARPC2	actin related protein 2/3 complex, subunit 2. 34kDa	1,079396338	0,176365232
		ARPC3	actin related protein 2/3 complex, subunit 3. 21kDa	-1,044050354	0,643502179
		ARPC4	actin related protein 2/3 complex, subunit 4. 20kDa	1,259909509	0,046854047
		ARPC5	actin related protein 2/3 complex, subunit 5. 16kDa	1,409263608	0,00497167
		CDC42EP2	CDC42 effector protein (Rho GTPase Binding) 2	-3,468782451	2,68607E-07
		DSTN	destrin (actin depolymerizing factor)	-1,857782582	5,36051E-07
		FNBPL1	formin binding protein 1-like	1,691883081	0,00042507
		GSN	gelsolin	1,112789136	0,709080846
		NCK1	NCK adaptor protein 1	1,618789345	0,000479158
		NCK2	NCK adaptor protein 2	-1,283161905	0,000300717
		PFN2	profilin 2	-2,16349467	0,000129815
		PIKFYVE	phosphoinositide kinase, FYVE finger containing	N/A	N/A
CC	CC	RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	1,368129899	0,006899561
		WAS	Wiskott-Aldrich syndrome	-1,035461912	0,648709347
		WASF1	WAS protein family, member 1	-4,02396288	1,88158E-06
		WASL	Wiskott-Aldrich syndrome-like	-1,068542555	0,501791705
		MAPRE1	microtubule-associated protein, RP/EB family, member 1	1,8673630139	9,74618E-09
	IP	CLASP1	cytoplasmic linker associated protein 1	-1,153968055	0,178087875
		CLASP2	cytoplasmic linker associated protein 2	-2,223009787	2,1733E-06
		CLIP1	CAP-GLY domain containing linker protein 1	-1,540032252	0,004227699
		CLIF2	CAP-GLY domain containing linker protein 2	1,637252549	0,056297992
		MACF1	microtubule-actin crosslinking factor 1	-1,167367445	0,259876985
Microtubules	OR	MAP4	microtubule-associated protein 4	2,026102822	0,000342443
		MAPRE1	microtubule-associated protein, RP/EB family, member 1	1,8673630139	9,74618E-09
		MAPRE2	microtubule-associated protein, RP/EB family, member 2	-1,350502445	0,005877551
		MAPT	microtubule-associated protein tau	-2,092003283	0,000123241
		MID1	midline 1 (Optiz/BBB syndrome)	2,164802551	0,004733856
	P-D	RACGAP1	Rac GTPase activating protein 1	3,5627358	1,31235E-05
		STMN1	stathmin 1	-1,612619976	0,00719846
		CLASP1	cytoplasmic linker associated protein 1	-1,153968055	0,178087875
		CLASP2	cytoplasmic linker associated protein 2	-2,223009787	2,1733E-06
		MAP4	microtubule-associated protein 4	2,026102822	0,000342443
	SP	MAPRE1	microtubule-associated protein, RP/EB family, member 1	1,8673630139	9,74618E-09
		MAPRE2	microtubule-associated protein, RP/EB family, member 2	-1,350502445	0,005877551
		MAPT	microtubule-associated protein tau	-2,092003283	0,000123241
		STMN1	stathmin 1	-1,612619976	0,00719846
		AURKA	aurora kinase A	3,667852103	8,01778E-05
		AURKB	aurora kinase B	N/A	N/A
		CLASP1	cytoplasmic linker associated protein 1	-1,153968055	0,178087875
		CLASP2	cytoplasmic linker associated protein 2	-2,223009787	2,1733E-06
		CLIP1	CAP-GLY domain containing linker protein 1	-1,540032252	0,004227699

	MAPRE1 RACGAP1	microtubule-associated protein. RP/EB family, member 1 Rac GTPase activating protein 1	1,867360139 3,5627358	9,74618E-09 1,31235E-05	
AX	BAIAP2 CDKS CDKSR1 CYFIP1 CYFIP2 MAPT	BAI1-associated protein 2 cyclin-dependent kinase 5 cyclin-dependent kinase 5, regulatory subunit 1 (p35) cytoplasmic FMR1 interacting protein 1 cytoplasmic FMR1 interacting protein 2 microtubule-associated protein tau	Fold change (Tumor vs Normal) -2,009296693 -2,055868754 -2,856023697 1,404888717 -4,810260509 -2,092003283	p-paired (Tumor vs Normal) 4,14814E-11 0,000117232 7,39998E-08 0,025109081 1,06932E-09 0,000123241	
FL	ARAP1 BAIAP2 CDC42 CDKS EZR MSN RDX	BAI1-associated protein 2 cell division cycle 42 cyclin-dependent kinase 5 ezrin moesin radixin	Fold change (Tumor vs Normal) N/A -2,009296693 -1,698341557 -2,055868754 N/A 2,808453914 2,764613092	p-paired (Tumor vs Normal) N/A 4,14814E-11 1,81298E-05 0,000117232 N/A 0,000121129 0,000635606	
G	CDKS CDKSR1 MAPT	cyclin-dependent kinase 5 cyclin-dependent kinase 5, regulatory subunit 1 (p35) microtubule-associated protein tau	Fold change (Tumor vs Normal) -2,055868754 -2,856023697 -2,092003283	p-paired (Tumor vs Normal) 0,000117232 7,39998E-08 0,000123241	
LAM	ACTR3 ARFIP2 ARPC5 CDKS CTTN CYFIP1 CYFIP2 NCK1 PPP1R12A PPP1R12B RAC1 RDX WASL	ARP3 actin-related protein 3 homolog (yeast) ADP-ribosylation factor interacting protein 2 actin related protein 2/3 complex, subunit 5, 16kDa cyclin-dependent kinase 5 cortactin cytoplasmic FMR1 interacting protein 1 cytoplasmic FMR1 interacting protein 2 NCK adaptor protein 1 protein phosphatase 1, regulatory subunit 12A protein phosphatase 1, regulatory subunit 12B ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) radixin Wiskott-Aldrich syndrome-like	Fold change (Tumor vs Normal) 1,504270418 1,333546786 1,409263608 -2,055868754 1,12049064 1,404888717 -4,810260509 1,618789345 -1,18774202 -2,094004198 1,368129899 2,764613092 -1,068542555	p-paired (Tumor vs Normal) 0,0009155 0,017886494 0,000117232 0,000497167 0,091010693 0,025109081 1,06932E-09 0,000479158 0,102922005 1,6679E-06 0,006899561 0,000635606 0,501791705	
Projections	MV	EZR MSN RDX	ezrin moesin radixin	Fold change (Tumor vs Normal) N/A 2,808453914 2,764613092	p-paired (Tumor vs Normal) N/A 0,000121129 0,000635606
P	CDC42 CDC42EP2	cell division cycle 42 CDC42 effector protein (Rho GTPase binding) 2	Fold change (Tumor vs Normal) -1,698341557 -3,468782451	p-paired (Tumor vs Normal) 1,81298E-05 2,68607E-07	
RF	ARFIP2 CTTN CYFIP1 CYFIP2 EZR RAC1 RDX	ADP-ribosylation factor interacting protein 2 cortactin cytoplasmic FMR1 interacting protein 1 cytoplasmic FMR1 interacting protein 2 ezrin ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) radixin	Fold change (Tumor vs Normal) 1,333546786 1,12049064 1,404888717 -4,810260509 N/A 1,368129899 2,764613092	p-paired (Tumor vs Normal) 0,017886494 0,091010693 0,025109081 1,06932E-09 N/A 0,006899561 0,000635606	
CS-S-P	CS-S-P	ARAP1 ARHGEF11 CDC42 CDC42EP2 CDC42EP3 CLASP1 CLASP2 CYFIP1 CYFIP2 EZR LLGL1 MARK2 MYLK2 SSH1	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1 Rho guanine nucleotide exchange factor (GEF) 11 cell division cycle 42 CDC42 effector protein (Rho GTPase binding) 2 CDC42 effector protein (Rho GTPase binding) 3 cytoplasmic linker associated protein 1 cytoplasmic linker associated protein 2 cytoplasmic FMR1 interacting protein 1 cytoplasmic FMR1 interacting protein 2 ezrin lethal giant larvae homolog 1 (Drosophila) MAP/microtubule affinity-regulating kinase 2 myosin light chain kinase 2 slingshot protein phosphatase 2	Fold change (Tumor vs Normal) N/A -1,335574534 -1,698341557 -3,468782451 -1,453285561 -1,153968055 -2,223009787 1,404888717 -4,810260509 N/A -1,101158545 -1,062813134 -1,036532339 1,029327282	p-paired (Tumor vs Normal) N/A 0,044884968 1,81298E-05 2,68607E-07 0,008479265 0,178087875 2,1733E-06 0,000113748 0,088364623 0,00113748 0,0818797793 0,650872594
CMM	CMM	ACTR2 ACTR3 ARAP1 ARFIP2 ARHGDIB ARHGEF11 ARHGEF11 APC1B APRC2 APRC3 APRC5 CALD1 CDKS CDKSR1 DSTN MSN NCK1 PAK4 RAC1 ROCK1 WASF1 WASL	ARP2 actin-related protein 2 homolog (yeast) ARP3 actin-related protein 3 homolog (yeast) ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1 ADP-ribosylation factor interacting protein 2 Rho GDP Dissociation Inhibitor (GDI) Beta Rho guanine nucleotide exchange factor (GEF) 11 Rho guanine nucleotide exchange factor (GEF) 11 actin related protein 2/3 complex, subunit 1B, 41kDa actin related protein 2/3 complex, subunit 2, 34kDa actin related protein 2/3 complex, subunit 3, 21kDa actin related protein 2/3 complex, subunit 5, 16kDa caldesmon 1 cyclin-dependent kinase 5 cyclin-dependent kinase 5, regulatory subunit 1 (p35) destrin (actin depolymerizing factor) moesin NCK adaptor protein 1 p21 protein (Cdc42/Rac)-activated kinase 4 ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) Rho-associated, coiled-coil containing protein kinase 1 WAS protein family, member 1 Wiskott-Aldrich syndrome-like	Fold change (Tumor vs Normal) -1,073835449 1,504270418 N/A 1,333546786 N/A -1,335574534 -1,698341557 -3,468782451 1,062813134 -1,036532339 1,029327282	p-paired (Tumor vs Normal) 0,455483458 0,0009155 N/A 0,017886494 N/A 0,044884968 0,001863115 0,017635523 0,643502179 0,00497167 1,40935E-05 2,055868754 -2,856023697 -1,857782582 2,808453914 1,618789345 1,192387393 1,368129899 1,493960786 -4,02396288 -1,068542555
M	AURKA AURKB CCNA1 CCNB2 CIT CLASP1 CLASP2 CLIP1 MAPRE1 MAPRE2	aurora kinase A aurora kinase B cyclin A1 cyclin B2 citron (rho-interacting, serine/threonine kinase 21) cytoplasmic linker associated protein 1 cytoplasmic linker associated protein 2 CAP-GLY domain containing linker protein 1 microtubule-associated protein, RP/EB family, member 1 microtubule-associated protein, RP/EB family, member 2	Fold change (Tumor vs Normal) 3,667852103 N/A -5,183452848 10,1492354 -2,7196239 -1,513968055 -2,223009787 -1,540032252 1,867360139 -1,350502445	p-paired (Tumor vs Normal) 8,01778E-05 N/A 3,92901E-08 0,000334039 1,94279E-05 0,178087875 5,36051E-07 0,000121129 0,000479158 0,050452728 0,006899561 3,92551E-06 1,88158E-06 0,501791705	
Cell Cycle	CK	ARHGEF11 AURKB AURKC DSTN RACGAP1 ROCK1	Rho guanine nucleotide exchange factor (GEF) 11 aurora kinase B aurora kinase C destrin (actin depolymerizing factor) Rac GTPase activating protein 1 Rho-associated, coiled-coil containing protein kinase 1	Fold change (Tumor vs Normal) -1,335574534 N/A 1,666346974 -1,857782582 3,5627358 1,493960786	p-paired (Tumor vs Normal) 0,044884968 N/A 0,028995905 5,36051E-07 1,31235E-05 3,52551E-06
CA	BAIAP2 MSN NCK1 NCK2 PAK1	BAI1-associated protein 2 moesin NCK adaptor protein 1 NCK adaptor protein 2 p21 protein (Cdc42/Rac)-activated kinase 1	Fold change (Tumor vs Normal) -2,009296693 2,808453914 1,618789345 -1,283161905 -3,411655019	p-paired (Tumor vs Normal) 4,14814E-11 0,000121129 0,000479158 0,000300717 1,93631E-06	
Cal	Cal			Fold change (Tumor vs Normal)	p-paired (Tumor vs Normal)

		CALD1	caldesmon 1	3,205977129	1,40935E-05
		CALM1	calmodulin 1 (phosphorylase kinase, delta)	-2,035309518	1,27552E-05
		CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	2,513877779	7,90035E-05
		IQGAP1	IQ motif containing GTPase activating protein 1	2,74804037	7,64335E-05
		IQGAP2	IQ motif containing GTPase activating protein 2	8,329465659	0,000618624
		MYLK	myosin light chain kinase	-1,796372626	0,000510053
		MYLK2	myosin light chain kinase 2	-1,036532339	0,818797793
		PPP3CA	protein phosphatase 3. catalytic subunit. alpha isozyme	-4,359838933	6,14416E-08
		PPP3CB	protein phosphatase 3. catalytic subunit. beta isozyme	-4,105229363	1,18517E-09
G-Prot	G-Prot	ArAP1	ArfGAP with RhoGAP domain. ankyrin repeat and PH domain 1	N/A	N/A
		ARFIP2	ADP-ribosylation factor interacting protein 2	1,333547686	0,017886494
		ARHGAP6	Rho GTPase activating protein 6	-1,133600022	0,437233372
		ARHGDI1	Rho GDP Dissociation Inhibitor (GDI) Beta	N/A	N/A
		ARHGEF11	Rho guanine nucleotide exchange factor (GEF) 11	-1,335574534	0,044884968
		CDC42	cell division cycle 42	-1,698341557	1,81298E-05
		CDC42EP2	CDC42 effector protein (Rho GTPase binding) 2	-3,468782451	2,68607E-07
		CFL1	cofilin 1 (non-muscle)	1,645596696	0,023982924
		CIT	citron (rho-interacting. serine/threonine kinase 21)	2,7196239	1,94279E-05
		CYFIP1	cytoplasmic FMR1 interacting protein 1	1,404888717	0,025109081
		CYFIP2	cytoplasmic FMR1 interacting protein 2	-4,810260509	1,06932E-09
		DIAPH1	diaphanous-related formin 1	1,43994947	0,001519606
		IQGAP1	IQ motif containing GTPase activating protein 1	2,74804037	7,64335E-05
		IQGAP2	IQ motif containing GTPase activating protein 2	8,329465659	0,000618624
		LIMK1	LIM domain kinase 1	-2,446843602	2,62139E-05
		LIMK2	LIM domain kinase 2	-1,028411463	0,761874097
		MAPK13	mitogen-activated protein kinase 13	-1,132843673	0,101824605
		RAC1	ras-related C3 botulinum toxin substrate 1 (rho family. small GTP binding protein Rac1)	1,368129899	0,006899561
		RACGAP1	Rac GTPase activating protein 1	3,5627358	1,31235E-05
		RHOA	ras homolog family member A	1,236798655	0,100369469
		ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,493960786	3,52551E-06
		TIAM1	T-cell lymphoma invasion and metastasis 1	-1,873195325	2,35526E-06
		WAS	Wiskott-Aldrich syndrome	-1,035461912	0,648709347
		WASL	Wiskott-Aldrich syndrome-like	-1,068542555	0,501791705
Kin & Pho	Kin & Pho	AURKA	aurora kinase A	3,667852103	8,01778E-05
		AURKB	aurora kinase B	N/A	N/A
		AURKC	aurora kinase C	1,666346974	0,028995905
		CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	2,513877779	7,90035E-05
		CDC42BP1	CDC42 binding protein kinase alpha (DMPK-like)	-1,432138592	0,000719385
		CDK5	cyclin-dependent kinase 5	-2,055868754	0,001117232
		CDKS1	cyclin-dependent kinase 5. regulatory subunit 1 (p35)	-2,856023697	7,39998E-08
		CIT	citron (rho-interacting. serine/threonine kinase 21)	-2,7196239	1,94279E-05
		LIMK1	LIM domain kinase 1	-2,446843602	2,62139E-05
		LIMK2	LIM domain kinase 2	-1,028411463	0,761874097
		MAP3K11	mitogen-activated protein kinase kinase kinase 11	1,092101239	0,279951147
		MAPK13	mitogen-activated protein kinase 13	-1,132843673	0,101824605
		MARK2	MAP/microtubule affinity-regulating kinase 2	-1,602813134	0,001113748
		MYLK	myosin light chain kinase	-1,796372626	0,000510053
		MYLK2	myosin light chain kinase 2	-1,036532339	0,818797793
		PAK1	p21 protein (Cdc42/Rac)-activated kinase 1	-3,411655019	1,93631E-06
		PAK4	p21 protein (Cdc42/Rac)-activated kinase 4	1,192387393	0,054052728
		PPP1R12A	protein phosphatase 1. regulatory subunit 12A	-1,18774202	0,102922005
		PPP1R12B	protein phosphatase 1. regulatory subunit 12B	-2,094004198	1,6679E-06
		PPP3CA	protein phosphatase 3. catalytic subunit. alpha isozyme	-4,359838933	6,14416E-08
		PPP3CB	protein phosphatase 3. catalytic subunit. beta isozyme	-4,105229363	1,18517E-09
		ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,493960786	3,52551E-06
		SSH1	slingshot protein phosphatase 1	1,029327282	0,650872594
		SSH2	slingshot protein phosphatase 2	1,169892989	0,277768942

**Supplementary Table 1 showing Groups, Gene name and values for dataset used in Figure 2**

Group	Subgroup	IP	Gene	Gene Name	Fold change (GBM vs Normal)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)
Actin Filaments	Cofilin	ACTR3	ARP2 actin-related protein 2 homolog (yeast)	-0,426641328	0,2723996348	-1,14093913	0,585046251	-1,879036034	0,231162818	
		ACTR3	ARP2 actin-related protein 3 homolog (yeast)	1,18832922	0,374902326	1,25261042	0,46143808	1,12478626	0,764985477	
		ACTR3	Actin related protein 2/3 complex, subunit 4, 21kDa	1,038005605	0,39718375	1,25261042	0,46143808	1,12478626	0,764985477	
		ACTR2	Actin related protein 2/3 complex, subunit 2, 340kDa	1,215948193	0,179801397	-1,06183245	0,81135202	1,414917511	0,45451307	
		ACTR3	actin related protein 2/3 complex, subunit 3, 210kDa	1,283477171	0,172562762	-1,19707362	0,46644745	1,18791073	0,45451307	
	Cofilin 1 (non-muscle)	ACTR3	actin related protein 2/3 complex, subunit 5, 160kDa	1,232037939	0,16462121	-2,48830523	0,46143808	1,232037939	0,45451307	
		ACTR3	actin related protein 2/3 complex, subunit 6, 160kDa	1,17603644	0,443073821	-1,07083644	0,874854625	1,12955987	0,231162818	
		ACTR3	Cofilin 1	-0,219317717	0,043018051	-6,8413881	0,946855659	-9,9695678	0,231162818	
		ACTR3	cofilin 1 (non-muscle)	1,356080005	0,20031335	-4,590932483	0,946855659	-3,241166485	0,231162818	
		ACTR3	cofilin 1 (non-muscle)	-1,99816183	0,03451639	-1,726817529	0,177030342	-2,38130934	0,044803104	
Cofilin 2	CTNNA1	CYFIP1	cytoklastic FMR1 interacting protein 1	2,91232502	0,057579484	2,91311202	0,460670924	2,73228644	0,231162818	
	CTNNA1	CYFIP2	cytoklastic FMR1 interacting protein 2	1,454824528	0,052083628	1,511815418	0,460670924	1,20838883	0,231162818	
	CTNNA1	DARPP32	diaphanous-related formin 2	1,046645297	0,511658837	1,008636765	0,94398111	1,08153866	0,231162818	
	CTNNA1	DSTN	destuin (actin depolymerizing factor)	1,038021164	0,050885204	1,024111202	0,460670924	1,038021164	0,231162818	
	CTNNA1	EZR	destuin (actin depolymerizing factor)	-1,443755412	0,50137339	-2,179257732	0,283490591	-2,187257732	0,231162818	
Cofilin 3	CTNNA1	FSCM	fasin homolog 2, actin-bundling protein, internal (Stenograninatus purpureus)	1,062175311	0,05185386	1,410164564	0,95108267	1,80004896	0,231162818	
	CTNNA1	IQCB1	IQ motif Containing GTPase Activating Protein 2	1,442205638	0,28474188	1,402547151	0,460670924	1,402547151	0,231162818	
	CTNNA1	MACT3	Microtubule Actin Crosslinking Factor 1	-1,54713129	0,547163729	-1,48910165	0,460670924	1,063187913	0,231162818	
	CTNNA1	RDX	radixin	1,058830205	0,143405523	-1,403082729	0,312782755	-1,24807669	0,231162818	
	CTNNA1	SMD1	singlet protein phosphatase 1	1,674178737	0,143633081	-1,426305142	0,460670924	-1,20207463	0,231162818	
Cofilin 4	CTNNA1	WASF1	WAS protein family, member 1	1,380251144	0,20370636	1,47475575	0,956308783	1,360507775	0,41236951	
	CTNNA1	WASL	Wiskott-Aldrich syndrome-like	2,446804328	0,20370633	2,37707599	0,956308783	2,37707599	0,41236951	
	CTNNA1	WIF3	WIF-associated singlet phosphoprotein	1,512773947	0,324842137	2,739042889	0,531732444	1,67830738	0,566853039	
	CTNNA1	GDN	gelatin	-1,06062371	0,618624035	-1,11829688	0,746106217	-1,170864515	0,76765496	
	CTNNA1	IQCB1	IQ motif containing GTPase activating protein 1	1,442205638	0,28474188	-1,420254715	0,460670924	-1,420254715	0,76765496	
Cofilin 5	CTNNA1	LIMK1	LIM domain kinase 1	1,444315723	0,143633093	1,424404025	0,460670924	1,424404025	0,231162818	
	CTNNA1	LIMK1	LIM domain kinase 1	1,260242483	0,177635688	-1,07493468	0,94398111	-1,063187913	0,231162818	
	CTNNA1	NCKX1	NCK-associated kinase 1	1,359322131	0,230327397	-1,039719357	0,460670924	-1,039719357	0,231162818	
	CTNNA1	PTEN	proto-2	1,66885451	0,424553491	-1,009318952	0,460670924	-1,009318952	0,231162818	
	CTNNA1	RDX	radixin	1,262776557	0,144337039	-2,181035645	0,460670924	-2,181035645	0,231162818	
Cofilin 6	CTNNA1	ROCK1	robo-associated singlet-containing protein kinase 1	1,039945268	0,143633093	-1,488045263	0,460670924	-1,488045263	0,231162818	
	CTNNA1	ROCK2	ROCK2 effector protein (rho GTPase binding 2)	1,355334344	0,143633093	-1,408956447	0,460670924	-1,408956447	0,231162818	
	CTNNA1	SIN3A	SIN3A	1,046645667	0,808865245	1,046543643	0,956308783	1,030319042	0,41236951	
	CTNNA1	TFB1M	tfb1m	1,667464426	0,143633093	-1,302054579	0,460670924	-1,302054579	0,231162818	
	CTNNA1	WIF3	WIF-associated singlet phosphoprotein	1,355334344	0,143633093	-1,302054579	0,460670924	-1,302054579	0,231162818	
Cofilin 7	CTNNA1	NCX1	NCK-associated protein 1	1,35912116	0,155031077	3,077736805	0,460670924	2,88257301	0,429745678	
	CTNNA1	NCK2	NCK-associated protein 2	1,455713292	0,155031077	-1,078371571	0,460670924	-1,078371571	0,231162818	
	CTNNA1	PTEN	proto-2	1,66885451	0,424553491	-1,078371571	0,460670924	-1,078371571	0,231162818	
	CTNNA1	EZR	earin	-1,443755412	0,50137339	-2,245733737	0,460670924	-2,245733737	0,231162818	
	CTNNA1	LIGL1	lethal giant larvae homolog 3 (Drosophila)	2,726973169	0,074681281	-1,078371571	0,460670924	-1,078371571	0,231162818	
Cofilin 8	CTNNA1	MARH1	marh1	1,444315723	0,143633093	-1,078371571	0,460670924	-1,078371571	0,231162818	
	CTNNA1	NCX1	NCK-associated protein 1	1,35912116	0,155031077	3,077736805	0,460670924	2,88257301	0,429745678	
	CTNNA1	NCX2	NCK-associated protein 2	1,455713292	0,155031077	-1,078371571	0,460670924	-1,078371571	0,231162818	
	CTNNA1	PTEN	proto-2	1,66885451	0,424553491	-1,078371571	0,460670924	-1,078371571	0,231162818	
	CTNNA1	WIF3	WIF-associated singlet phosphoprotein	1,355334344	0,143633093	-1,078371571	0,460670924	-1,078371571	0,231162818	
Microtubules	Cofilin 1	ACTR3	ARP2 actin-related protein 2 homolog (yeast)	1,441315111	0,54745226	1,08385634	0,460670924	1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules	Cofilin 2	ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules	Cofilin 3	ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules	Cofilin 4	ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules	Cofilin 5	ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules	Cofilin 6	ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
		ACTR3	ARP2B ribonuclease factor interacting protein 2	1,442205638	0,28474188	-1,08385634	0,460670924	-1,08385634	0,231162818	
Microtubules</td										

	WASP1	WAS protein family, member 1 Wiskott-Aldrich syndrome-like	1,380251144 2,446803402	0,20376936 0,268792333	1,360507775 2,377769666	0,563087783 0,527005147	1,399474738 2,128766599	0,41230951 0,58520996	
M	AurKA	aurora kinase A	-2,132500638	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	
	AurKB	aurora kinase B	N/A	N/A	-1,003641112	N/A	N/A	N/A	
	CASK1	cyclin A1	1,373312113	N/A	1,203035223	0,013662191	0,289257379	0,030493157	
	CT1	c-Jun N-terminal interacting, serine/threonine kinase 21	-1,481663832	0,108764411	-1,321862465	0,6051792591	0,263279783	0,079505981	
	CLSPN1	cytoplasmic linker associated protein 1	1,334746653	0,046179407	1,26342425	0,157206336	1,396917688	0,144693347	
	CNTF	ciliary neurotrophic factor	1,568845584	0,046442443	1,566674488	0,897512562	1,264342358	0,263664477	
	CULP1	CAP-GLY domain containing linker protein 1	1,596812551	0,722479891	1,12902188	0,050602535	1,212670275	0,070505892	
	MAPRE1	microtubule-associated protein, Rb/E8 family, member 1	1,644016464	0,184601045	1,689543479	0,417476521	1,451780810	0,050705954	
	MAPRE2	microtubule-associated protein, Rb/E8 family, member 2	1,644016464	0,184601045	1,689543479	0,417476521	1,451780810	0,050705954	
Cell Cycle	CK	ARHGEP11	Rho guanine nucleotide exchange factor (GEF) 11	-1,007543022	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)
	AURKA	aurora kinase B	N/A	N/A	N/A	N/A	N/A	N/A	
	BTK	Bruton's tyrosine kinase	2,388027591	0,05233056	2,346655532	0,263265048	2,388027591	0,032947511	
	DSTN	destrin (actin depolymerizing factor)	-1,04566667	0,808865043	1,054126453	1,462123589	1,146212358	0,603663573	
	RAF1GAP1	Rac GTPase activating protein 1	1,399015782	0,495647404	1,572346633	0,455977806	1,353219331	0,135321933	
	ROCK1	rho-associated coiled-coil forming protein kinase 1	1,568845584	0,150921327	1,26342425	1,070372009	1,120802095	0,472205449	
CA	BAU9P2	BAL-associated protein 2	1,747439049	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	
	MSK1	mosQUITO kinase	1,350032066	0,040622128	-1,103142276	0,861354101	1,380933794	0,338802026	
	NCK1	NCK adaptor protein 1	1,339932124	0,051393397	1,321794622	0,263265048	1,390914485	0,074046006	
	NCK2	NCK adaptor protein 2	1,205057832	0,515377171	-1,078367541	0,798054689	1,320227322	0,424923098	
	PAK1	p21 protein (Cdc42/Rac)-activated kinase 1	2,392578135	0,150921327	2,166347292	0,451303094	2,646717577	0,428863864	
Cal	CalD1	calmodulin 1	-8,219317717	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	
	CALM1	calmodulin 1 (phosphorylase kinase, delta)	-1,563882588	0,040622128	-6,8413881	-9,36916578	-9,36916578	0,21623279	
	CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	-1,515812527	0,545147132	-1,546716799	0,284637837	0,74915718	0,084205262	
	CD44	cell-surface glycoprotein 300 kDa (CD44)	1,204516222	0,040622128	-1,003717457	0,6051792591	1,321794622	0,135321933	
	CDG4P2	CDG4 binding protein 2	1,972055914	0,238474168	2,23847335	0,44665209	1,592055914	0,424923098	
	CDH2	catenin (plakophilin-related armament) 2	1,434837373	0,4515704	1,537950238	0,458165019	1,210414581	0,083946416	
	CT1	c-Jun N-terminal interacting kinase kinase 1	1,390020022	0,263227322	1,248481002	0,232227318	1,380914485	0,77884242	
	PP93CA	protein phosphatase 3, catalytic subunit, alpha isozyme	1,706943132	0,008371384	-1,70247977	0,09005479	1,111939104	0,051905832	
	PP93CB	protein phosphatase 3, catalytic subunit, beta isozyme	1,512514767	0,001018478	-1,411766583	0,415653665	0,07194822		
G-Pro	G-Pro	MAP1	ArfGDP with RhoGAP domain, arfamin repeat and PH domain 1	1,444312111	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)
	ARHGAP1	ArfGDP-regulating factor interacting protein 2	1,583200639	0,051393397	1,003717457	0,861354101	1,003717457	0,041422296	
	ARHGAP6	Rho GTPase activating protein 6	2,408846276	0,040622128	-2,371678185	0,321279462	2,371678185	0,106062075	
	ARHGAP11	Rho guanine nucleotide exchange factor (GEF) 11	-1,007543022	N/A	-1,087196137	N/A	N/A	N/A	
	CDG4P2	CDG4 binding protein 2	1,203302066	0,040622128	-1,046079429	0,406079429	-1,046079429	0,169848311	
	CDH2	catenin (plakophilin-related armament) 2	1,203302066	0,040622128	-1,046079429	0,406079429	-1,046079429	0,169848311	
	CT1	c-Jun N-terminal interacting kinase kinase 1	-1,998151835	0,053415639	-1,726417529	0,177030942	2,361130316	0,044031014	
	CT1	c-Jun N-terminal interacting kinase 1	1,434516222	0,109764411	-1,321862465	0,6051792591	1,625428875	0,071905081	
	CDYF2	cystosolic dynein interacting protein 2	1,332002066	0,051393397	1,273310242	0,263227318	2,332002066	0,083946416	
	DKP1	diaphanous-related formin 1	1,444016251	0,051393397	1,511656837	0,941951111	1,006183665	0,424923098	
	DQBP1	dihydrofolate reductase-activating protein 1	1,442205568	0,051393397	1,402547161	0,446655659	1,484213210	0,371757953	
	IQGAP1	IQ motif containing GTPase activating protein 2	1,922055914	0,238474168	2,23867335	0,446855659	1,863003904	0,424923098	
	LIMK1	LIM domain kinase 1	1,244112072	0,150921327	1,244112072	0,232227318	1,244112072	0,150921327	
	LIMK2	LIM domain kinase 2	1,244112072	0,150921327	1,244112072	0,232227318	1,244112072	0,150921327	
	MAP13	mitogen-activated protein kinase 13	1,122909863	0,807365688	-1,073736588	0,173703170	1,073703170	0,033353111	
	RACK1	Rac GTPase activating protein 1	1,499057336	0,049564743	-1,572346663	0,453977806	2,352319337	0,135321933	
	RH2A	ras homolog family member A	1,709968484	0,104528187	-1,648069511	0,434280352	1,784180996	0,044485877	
	ROCK1	rho GTPase-activating protein kinase 1	1,568845584	0,517402521	1,503901203	0,1503901203	1,423205211	0,423205211	
	TM1M1	T-cell lymphoma invasion and metastasis 1	2,637307813	0,015731111	-1,966512579	0,3131505463	3,619345454	0,07986404	
	WAS	Wiskott-Aldrich syndrome	1,709845041	0,494624207	1,246512515	0,767790534	1,026151246		
	WASD1	Wiskott-Aldrich syndrome-like	1,448820582	0,268792333	2,177030947	0,232227318	2,332002066	0,083946416	
Kin & Pho	Kin & Pho	AURKA	aurora kinase A	-2,132500638	p-paired (GBM vs Normal)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)	Fold change (GBM CD133+ vs Normal CD133+)	p-paired (GBM CD133+ vs Normal CD133+)
	AURKB	aurora kinase B	N/A	N/A	-1,54654215	N/A	N/A	N/A	
	CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	-1,515812527	0,545147132	-1,56716799	0,284637837	1,151408747	0,74915718	
	CDG4P2A	CDG4 binding protein kinase alpha (DMPK-like)	1,475788024	0,127318181	-1,497231114	0,345540592	-1,098465813	0,424908581	
	CDK5R1	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	2,317953447	0,06365096	1,519849882	0,397028083	3,616102821	0,204063069	
	CT1	c-Jun N-terminal interacting, serine/threonine kinase 21	-1,481663832	0,108764411	-1,213713181	0,345540592	1,232931280	0,079505981	
	DKP1	diaphanous-related formin 1	1,444312111	0,154363491	-1,423440205	0,409837074	1,444312111	0,393454734	
	LIMK1	LIM domain kinase 1	1,244112072	0,150921327	1,244112072	0,232227318	1,244112072	0,150921327	
	MAP13	mitogen-activated protein kinase kinase kinase 11	1,542105721	0,145363491	-1,074818281	0,941994648	1,639518694	0,1705286	
	MAPF13	MAPF13 mitogen-activated protein kinase kinase 13	1,222089083	0,807365688	1,187301709	0,71882281	2,332002066	0,083946416	
	MARP1	MAP/microtubule affinity-regulating kinase 2	2,04936666	0,185450574	1,79733471	0,515333852	2,338802473	0,40505764	
	MYLK2	myosin light chain kinase 2	1,448312072	0,153384374	1,379301459	0,313001459	1,234411207	0,371757953	
	PAK1	p21 protein (Cdc42/Rac)-activated kinase 1	1,707406072	0,263221392	1,614878053	0,363720092	1,340739191	0,77884242	
	PAK2	p21 protein (Cdc42/Rac)-activated kinase 4	1,546453202	0,051393397	1,277030947	0,451303094	0,428663864		
	PP93CA	protein phosphatase 1, regulatory subunit 2A	-1,554129838	0,753370664	-1,029320188	0,973531448	2,129142373	0,759824621	
	PP93CB	protein phosphatase 1, regulatory subunit 2B	1,424112072	0,051393397	-1,280320188	0,753370664	2,129142373	0,759824621	
	PP93CD	protein phosphatase 1, catalytic subunit, alpha isozyme	-1,506943132	0,050817384	-1,70247977	0,232227318	1,711393910	0,051905832	
	PP93CB	protein phosphatase 1, catalytic subunit, beta isozyme	1,512514767	0,0508101876	-1,417366583	0,03900549	1,645563665	0,07194822	
	PP93CD	protein phosphatase 1, catalytic subunit, gamma isozyme	1,508002393	0,273400595	1,203713022	0,1503901203	1,300002393	0,423205211	
	SDH1	singletop protein phosphatase 1	1,347307837	0,310504812	1,282674079	0,512189988	1,622074637	0,583205495	
	SDH2	singletop protein phosphatase 2	3,417839666	0,220042935	4,474374744	0,474305435	2,727166561	0,552679761	

**Supplementary Table 1 showing Groups, Gene name and values for dataset used in Figure 3**

Group	Subgroup	Gene	Gene Name	Fold change (Stem v Differentiation)	p-paied (Stem v Differentiation)
Actin Filaments	P-D	ACTR2	ARP2 actin-related protein 2 homolog (yeast)	-1,503602234	0,315306589
		ACTR3	ARP3 actin-related protein 3 homolog (yeast)	-1,364659104	0,045985838
		ARP/C18	Actin Related Protein 2/3 Complex, Subunit 1B	-2,035619024	0,233502008
		ARP/C2	actin related protein 2/3 complex, subunit 2. 34kDa	-1,519073566	0,068624421
		ARP/C3	actin related protein 2/3 complex, subunit 3. 21kDa	-1,246892199	0,136944137
		ARP/C4	actin related protein 2/3 complex, subunit 4. 20kDa	1,039243684	0,903394477
		ARP/C5	actin related protein 2/3 complex, subunit 5. 16kDa	-1,242616715	0,653671905
		CALD1	Caldesmon 1	-1,856108445	0,14922611
		CDC42EP3	CDC42 Effector Protein (Rho GTPase Binding) 3	-1,861738951	0,246473074
		CFI1	cofilin 1 (non-muscle)	-1,136897626	0,40051435
	OR	CYFIP1	cytoplasmic FMR1 interacting protein 1	1,137896182	0,681131705
		CYFIP2	cytoplasmic FMR1 interacting protein 2	1,596264494	0,542958341
		DIAPH1	diaphanous-related formin 1	1,007075561	0,952344888
		DSTN	destrin (actin depolymerizing factor)	-1,408392969	0,077267785
		EZR	ezrin	-1,596251198	0,334766835
		FSCN2	fascin homolog 2. actin-bundling protein. retinal (Strongylocentrotus purpuratus)	-1,257740252	0,099187828
		GSN	gelsolin	-1,319072362	0,394984075
		IQGAP2	IQ Motif Containing GTPase Activating Protein 2	-1,277927816	0,483096003
		MACF1	Microtubule-Actin Crosslinking Factor 1	1,23177917	0,449561642
		PFN2	profilin 2	-1,095099233	0,705155655
	P-D	RDX	radixin	-2,038936169	0,455088797
		SSH1	slingshot protein phosphatase 1	-1,040441469	0,934539012
		SSH2	slingshot protein phosphatase 2	-1,40249594	0,018442329
		WASF1	WAS protein family. member 1	1,328340735	0,514233374
		WASL	Wiskott-Aldrich syndrome-like	1,114032853	0,839941625
		VASP	vasodilator-stimulated phosphoprotein	-2,088668126	0,257062298
		CD42BPPA	CD42 binding protein kinase alpha (DMPK-like)		
		CFI1	cofilin 1 (non-muscle)	-1,136897626	0,40051435
		CRK	v-crk sarcoma virus CT10 oncogene homolog (avian)	1,123194942	0,38316088
		DIAPH1	diaphanous-related formin 1	-1,257740252	0,099187828
Microtubules	CC	DSTN	destrin (actin depolymerizing factor)	-1,07075561	0,952344888
		EZR	ezrin	-1,408392969	0,077267785
		FSCN2	fascin homolog 2. actin-bundling protein. retinal (Strongylocentrotus purpuratus)	-1,596251198	0,334766835
		GSN	gelsolin	-1,257740252	0,099187828
		IQGAP1	IQ motif containing GTPase activating protein 1	-1,319072362	0,394984075
		LIMK1	LIM domain kinase 1	-1,550087076	0,144930732
		LIMK2	LIM domain kinase 2	-1,12698585	0,241706114
		NCK1	NCK adaptor protein 1	-1,497858604	0,302910245
		PFN2	profilin 2	1,217411578	0,275239235
		RDX	radixin	-1,095099233	0,705155655
SP	P-D	RHOA	ras homolog family member A	-2,038936169	0,455088797
		ROCK1	Rho-associated. coiled-coil containing protein kinase 1	1,024052574	0,930925928
		SSH1	slingshot protein phosphatase 1	1,031891352	0,838245327
		SSH2	slingshot protein phosphatase 2	-1,040441469	0,934539012
		CD42EP2	CDC42 binding protein kinase alpha (DMPK-like)	-1,40249594	0,018442329
		DSTN	destrin (actin depolymerizing factor)	-1,494002645	0,079772878
		FNB1L	formin binding protein 1-like	-1,408392969	0,077267785
		GSN	gelsolin	1,392401921	0,371224511
		NCK1	NCK adaptor protein 1	-1,319072362	0,394984075
		NCK2	NCK adaptor protein 2	-1,361239843	0,471943662
AX	OR	PFN2	profilin 2	-1,095099233	0,705155655
		PIK3YVE	phosphoinositide kinase. FYVE finger containing	1,019008089	0,79111798
		RAC1	ras-related C3 botulinum toxin substrate 1 (rho family. small GTP binding protein Rac1)	1,1882659816	0,45114209
		WAS	Wiskott-Aldrich syndrome	-1,213942957	0,344056056
		WASF1	WAS protein family. member 1	1,328340735	0,514233374
		WASL	Wiskott-Aldrich syndrome-like	1,114032853	0,839941625
		ARFIP2	ADP-ribosylation factor interacting protein 2	-1,234152222	0,155549477
		CLASP1	cytoplasmic linker associated protein 1	1,061998045	0,868801082
		CTTN	catenin	2,834464354	0,157080972
		DSTN	destrin (actin depolymerizing factor)	1,345938836	0,336549573
CDK5	P-D	EZR	ezrin	1,395918962	0,497165165
		LLGL1	lethal giant larvae homolog 1 (Drosophila)	1,23177917	0,449561642
		MAPRE1	microtubule-associated protein. RP/EB family. member 1	-1,073879882	0,756696819
		MAPRE2	microtubule-associated protein. RP/EB family. member 2	-1,037168917	0,908769208
		MAPT	microtubule-associated protein tau	1,112404355	0,655329185
		MID1	midline 1 (Optiz/BBB syndrome)	3,070129918	0,107065844
		RACGAP1	Rac GTPase activating protein 1	1,118441587	0,730462803
		STMN1	stathmin 1	-1,154046397	0,438821409
		CLASP1	cytoplasmic linker associated protein 1	-1,493790433	0,098942573
		CLASP2	cytoplasmic linker associated protein 2	1,061998045	0,868801082
CDK5R1	OR	CLIP1	CAP-GLY domain containing linker protein 1	2,834464354	0,157080972
		MACF1	CAP-GLY domain containing linker protein 2	-1,073879882	0,756696819
		MAP4	microtubule-associated protein 4	-1,037168917	0,908769208
		MAPRE1	microtubule-associated protein. RP/EB family. member 1	1,112404355	0,655329185
		MAPRE2	microtubule-associated protein. RP/EB family. member 2	3,070129918	0,107065844
		MAPT	microtubule-associated protein tau	-1,493790433	0,098942573
		STMN1	stathmin 1	1,061998045	0,868801082
		CLASP1	cytoplasmic linker associated protein 1	2,834464354	0,157080972
		CLIP1	CAP-GLY domain containing linker protein 1	-1,073879882	0,756696819
		MAPRE1	microtubule-associated protein. RP/EB family. member 1	-1,037168917	0,908769208
CDK5R1	SP	RACGAP1	Rac GTPase activating protein 1	1,154046397	0,438821409
		AURKA	aurora kinase A	-2,0000549	0,089832412
		AURKB	aurora kinase B	N/A	N/A
		CLASP1	cytoplasmic linker associated protein 1	1,061998045	0,868801082
		CLASP2	cytoplasmic linker associated protein 2	2,834464354	0,157080972
		CLIP1	CAP-GLY domain containing linker protein 1	1,345938836	0,336549573
		MAPRE1	microtubule-associated protein. RP/EB family. member 1	-1,037168917	0,908769208
		RACGAP1	Rac GTPase activating protein 1	-1,154046397	0,438821409
		BAIAP2	BAI1-associated protein 2	-1,621716993	0,0484634
		CDK5	cyclin-dependent kinase 5	-1,133171035	0,339107101
CDK5R1	AX	CDK5R1	cyclin-dependent kinase 5. regulatory subunit 1 (p35)	5,676197133	0,155534829

Projections	FL	CYFIP3	cytoplasmic FMR1 interacting protein 1	1,137896182	0,681131705
		CYFIP2	cytoplasmic FMR1 interacting protein 2	1,596264494	0,543958341
		MAPT	microtubule-associated protein tau	3,070129918	0,107065844
		ARAP1		Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
		BA1AP2	BAI1-associated protein 2	-1,236389918	0,353293392
	G	CDC42	cell division cycle 42	-1,621716993	0,0484634
		CDK5	cyclin-dependent kinase 5	-3,098634622	0,377793227
		EZR	ezrin	-1,133171035	0,339107101
	LAM	MSN	moesin	-1,596251198	0,334766835
		RDX	radixin	-1,285850533	0,099852236
		CDK5	cyclin-dependent kinase 5	-2,038936169	0,455088797
CS-S-P	MV	CDK5R1	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
		MAPT	microtubule-associated protein tau	-1,133171035	0,339107101
		ACTR3	ARP3 actin-related protein 3 homolog (yeast)	5,676197133	0,15534829
		ARFIP2	ADP-ribosylation factor interacting protein 2	3,070129918	0,107065844
		ARP5C	actin related protein 2/3 complex, subunit 5, 16kDa		
	P	CDK5	cyclin-dependent kinase 5		
		CTTN	catenin		
		CYFIP1	cytoplasmic FMR1 interacting protein 1		
		CYFIP2	cytoplasmic FMR1 interacting protein 2		
		NCK1	NCK adaptor protein 1		
CMM	CS-S-P	PPP1R12A	protein phosphatase 1, regulatory subunit 12A		
		PPP1R12B	protein phosphatase 1, regulatory subunit 12B		
		RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)		
		RDX	radixin		
		WASL	Wiskott-Aldrich syndrome-like		
	M	EZR	ezrin	Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
		MSN	moesin	-1,596251198	0,334766835
		RDX	radixin	-1,285850533	0,099852236
		CDK5	cyclin-dependent kinase 5	-2,038936169	0,455088797
		CDCA2	cell division cycle 42		
Cell Cycle	CK	CDCA2EP2	CDC42 effector protein (Rho GTPase binding) 2		
		ARFIP2	ADP-ribosylation factor interacting protein 2		
		CTTN	catenin		
		CYFIP1	cytoplasmic FMR1 interacting protein 1		
		CYFIP2	cytoplasmic FMR1 interacting protein 2		
	CA	EZR	ezrin	Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
		RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	-3,098634622	0,377793227
		ROCK1	Rho-associated, coiled-coil containing protein kinase 1	-1,494002645	0,079772878
		WASF1	WAS protein family, member 1		
		WASL	Wiskott-Aldrich syndrome-like		
Cal	M	AURKA	aurora kinase A	Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
		AURKB	aurora kinase B	-1,236389918	0,353293392
		CCNA1	cyclin A1	1,157847151	0,032047868
		CCNB2	cyclin B2	-3,098634622	0,377793227
		CIT	citron (rho-interacting, serine/threonine kinase 21)	-3,098634622	0,377793227
	CK	CLASP1	cytoplasmic linker associated protein 1	-1,494002645	0,079772878
		CLASP2	cytoplasmic linker associated protein 2	-1,861738951	0,246473074
		CLIP1	CAP-GLY domain containing linker protein 1	1,061998045	0,868801062
		MAPRE1	microtubule-associated protein, RP/EB family, member 1	2,834464354	0,157080972
		MAPRE2	microtubule-associated protein, RP/EB family, member 2	1,131864269	0,543958341
G-Prot	Cal	AURKA	aurora kinase A	-1,596251198	0,334766835
		AURKB	aurora kinase B	-1,128544056	0,269171582
		AURKC	aurora kinase C	-1,273126325	0,129975017
		DSTN	destrin (actin depolymerizing factor)	-1,092614735	0,424341208
		RACGAP1	Rac GTPase activating protein 1	-1,040441469	0,934539012
	G-Prot	ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,114032853	0,839941625
		B1A1AP2	BAI1-associated protein 2		
		MSN	moesin		
		NCK1	NCK adaptor protein 1		
		NCK2	NCK adaptor protein 2		

		ARHGAP6	Rho GTPase activating protein 6	4,041287117	0,269730554
		ARHGDIB	Rho GDP Dissociation Inhibitor (GDI) Beta	N/A	N/A
		ARHGEF11	Rho guanine nucleotide exchange factor (GEF) 11	1,157847151	0,032047868
		CDC42	cell division cycle 42	-3,098634622	0,377973227
		CDC42EP2	CDC42 effector protein (Rho GTPase binding) 2	1,494002645	0,07972878
		CFI1	cofilin 1 (non-muscle)	-1,136897626	0,40051435
		CIT	citron (rho-interacting, serine/threonine kinase 21)	-1,196914076	0,401912233
		CYFIP1	cytoplasmic FMR1 interacting protein 1	1,137896182	0,681131705
		CYFIP2	cytoplasmic FMR1 interacting protein 2	1,596264494	0,543958341
		DIAPH1	diaphanous-related form 1	1,007075561	0,952344888
		IQGAP1	IQ motif containing GTPase activating protein 1	-1,550087076	0,144930732
		IQGAP2	IQ motif containing GTPase activating protein 2	-1,277927816	0,483096003
		LIMK1	LIM domain kinase 1	-1,126985885	0,241706114
		LIMK2	LIM domain kinase 2	-1,497858604	0,302910245
		MAPK13	mitogen-activated protein kinase 13	-1,169063329	0,301090941
		RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	1,188269816	0,45114209
		RACGAP1	Ras GTPase activating protein 1	-1,154046397	0,438821409
		RHOA	ras homolog family member A	1,024052574	0,930925928
		ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,031891352	0,838245327
		TIA1M1	T-cell lymphoma invasion and metastasis 1	-1,430644216	0,426416601
		WAS	Wiskott-Aldrich syndrome	1,213942957	0,344056056
		WASL	Wiskott-Aldrich syndrome-like	1,114032853	0,839941625
Kin & Pho	Kin & Pho	AURKA	aurora kinase A	Fold change (Stem v Differentiation)	p-paiied (Stem v Differentiation)
Kin & Pho	Kin & Pho	AURKB	aurora kinase B	-2,0000549	0,089832412
Kin & Pho	Kin & Pho	AURKC	aurora kinase C	N/A	N/A
Kin & Pho	Kin & Pho	CASK	calcium/calmodulin-dependent serine protein kinase (MAGUK family)	-1,069101124	0,683372277
Kin & Pho	Kin & Pho	CDC42BPA	CDC42 binding protein kinase alpha (DMPK-like)	1,31177174	0,451319417
Kin & Pho	Kin & Pho	CDK5	cyclin-dependent kinase 5	-1,268682948	0,541596111
Kin & Pho	Kin & Pho	CDK5R1	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	-1,133171035	0,339107101
Kin & Pho	Kin & Pho	CIT	citron (rho-interacting, serine/threonine kinase 21)	5,676197133	0,155534829
Kin & Pho	Kin & Pho	LIMK1	LIM domain kinase 1	-1,196914076	0,401912233
Kin & Pho	Kin & Pho	LIMK2	LIM domain kinase 2	-1,126985885	0,241706114
Kin & Pho	Kin & Pho	MAP3K11	mitogen-activated protein kinase kinase kinase 11	-1,497858604	0,302910245
Kin & Pho	Kin & Pho	MAPK13	mitogen-activated protein kinase 13	-1,13035059	0,274890011
Kin & Pho	Kin & Pho	MARK2	MAP/microtubule affinity-regulating kinase 2	-1,169063329	0,301090941
Kin & Pho	Kin & Pho	MYLK	myosin light chain kinase	-1,273126325	0,129975017
Kin & Pho	Kin & Pho	MYLK2	myosin light chain kinase 2	-1,470396192	0,447098435
Kin & Pho	Kin & Pho	PAK1	p21 protein (Cdc42/Rac)-activated kinase 1	-1,092614735	0,424341208
Kin & Pho	Kin & Pho	PAK4	p21 protein (Cdc42/Rac)-activated kinase 4	-1,049636184	0,69563444
Kin & Pho	Kin & Pho	PPP1R12A	protein phosphatase 1, regulatory subunit 12A	-1,330618918	0,230576043
Kin & Pho	Kin & Pho	PPP1R12B	protein phosphatase 1, regulatory subunit 12B	-1,409612442	0,460024068
Kin & Pho	Kin & Pho	PPP3CA	protein phosphatase 3, catalytic subunit, alpha isozyme	-1,036232149	0,822408557
Kin & Pho	Kin & Pho	PPP3CB	protein phosphatase 3, catalytic subunit, beta isozyme	-1,273230036	0,229834996
Kin & Pho	Kin & Pho	ROCK1	Rho-associated, coiled-coil containing protein kinase 1	1,126069229	0,688322699
Kin & Pho	Kin & Pho	SSH1	slingshot protein phosphatase 1	1,031891352	0,838245327
Kin & Pho	Kin & Pho	SSH2	slingshot protein phosphatase 2	-1,040441469	0,934539012
Kin & Pho	Kin & Pho			-1,40249594	0,018442392