								p.(Gly171Leufs*46)										
								p.(Thr236Metfs*25)										
								p.(His170Gln)	p.(Thr236Metfs*60)									
								p.(Gly171Arg)	p.(Thr238Pro									
								p.(Gly171W)	p.(Thr238Ala)									
								p.Gly171Ala	p.(Gly239Ser)									
								p.(Gln172*)	p.(Gly239Ala)									
								p.(Pro173Thr)	p.(Gly239Asp)									
								p.(Ile174Val)	p.(Gly239Val)									
								p.(Ile174Asn)	p.(Phe240Val)									
								p.Ile174Thr	p.(Phe240Ser)									
								p.(Pro175Ala)	p.Arg241Cys									
								p.(Arg176*)	p.(Arg241Profs*100)									
								p.Arg176Leu	p.Arg241His									
								p.(Arg176Gln)	p.(Arg241Leu)									
								p.(Arg176Pro)	p.(Leu242Phe)									
								p.(Val177Leu)	p.(Arg243*)									
								p.(Val177Met)	p.Arg243Gln									
								p.(Val177Ala)	p.(Arg243Leu)									
								p.Glu178Gly	p.Pro244Leu									
								p.Glu178Val	p.(Val245Met)									
								p.(Tyr179Asn)	p.Val245Leu									
								p.(Tyr179His)	p.Val245Ala									
								p.(Glu182Lys)	p.Val245Glu									
								p.(Glu182Gly)	p.(Val245Val)									
								p.(Glu183Leu)	p.(Ala246Valfs*95)									
								p.(Glu183Gln)	p.(Ala246Val)									
								p.(Glu183Gly)	p.(Ala246Asp)									
								p.(Lys184Argfs*11)	p.(Gly247Ser)									
								p.(Thr186Hisfs*9)	p.(Gly247Arg)									
								p.(W187Glyfs*8)	p.(Gly247Alafs*94)									
								p.(W187Glyfs*12)	p.(Gly247Asp)									
								p.(Trp187Arg)	p.Gly247Val									
								p.(Trp187*)	p.(Leu248Pro)									
								p.(Trp187Cys)	p.(Leu248Arg)									
								p.(Trp187*)	p.(Leu249Phe)								p.(Tyr356His)	
								p.(Gly188Alafs*7)	p.(Leu249His)								p.(Tyr356*)	
								p.(Gly188Asp)	p.(Leu249Pro)								p.(Tyr356*)	
								p.(Val190Met)	p.(Arg252Glyfs*30)								p.(Cys357Gly)	
								p.Val190Ala	p.(Arg252Glyfs*89)								p.(Cys357Tyr)	
			p.(Glu57del)					p.(Val190Gly)	p.Arg252Gly								p.(Cys357*)	
			p. (Glu57Cysfs*77)					p.(Thr193Ile)	p.Arg252W								p.(Leu358Phe)	
			p.Asp59Tyr					p.(Leu194Glufs*5)	p.(Arg252Pro)								p.(Ser359*)	
			p.(Asp59Gly)					p.(Leu194Arg)	p.Arg252Gln								p.(Glu360*)	
			p.(Asp59Val)					p.(Leu194Pro)	p.(Phe254Ile)								p.(Lys361Gln)	
			p.(Asn61Asp)					p.(Ser196Leufs*2)	p.Leu255Val								p.(Pro362Thr)	
			p.(Asn61Lys)					p.(Ser196Thr)	p.Leu255Ser								p.(Pro362Leu)	
			p.(Asn61Lys)					p.(Ser196Tyr)	p.(Gly257Cys)								p.(Lys363Alafs*30)	
			p.(Leu62*)					p.(Tyr198Serfs*136)	p.(Gly257Ser)								p.(Lys363Asnfs*37)	
			p.(Leu62Val)					p.(Leu197_Tyr204Xfs*1)	p.(Gly257Val)								p.(Lys363Asn)	
			p.(Leu62Profs*3)					p.(Leu197Phe)	p.(Gly257Asp)								p.(Leu365_Leu369del)	
			p.(Leu62Pro)					p.(Tyr198Serfs*136)	p.(Leu258Pro)								p.(Leu365del)	
			p.(Thr63_His64delinsPN)					p.(Tyr198Cysfs*136)	p.Ala259Thr								p.(Pro366His)	
			p.(Thr63Pro)					p.(Tyr198*)	p.Ala259Val								p.(Leu367Profs*27)	
			p.(His64Thrfs*9)					p.(Thr200Asnfs*6)	p.(Arg261Gly)								p.(Leu367Wfs*33)	
			p.(His64*)					p.(Thr200Asn)	p.(Arg261*)				p.(Ile324Val)		p.(Leu367Profs*27)			
			p.(His64Asn)					p.(His201Tyr)	p.(Arg261Pro)				p.(Ex10_11_12_13del)		p.(Leu367Val)			
			p.(Ile65Val)					p.(His201Arg)	p.Arg261Gln				p.(Ile324Asn)		p.(Leu367Pro)			
			p.(Ile65Lysfs*9)					p.(His201Gln)	p.(Val262Gly)				p.(Tyr325Cys)		p.(Leu367Argv			
			p.(Ile65Ser)					p.(Ala202Thr)	p.(Phe263Ser)				p.(Tyr325*)		p.(Leu367Leu)			
			p.(Ile65Asn)					p.(Ala202Val)	p.(Phe263Leu)				p.(Trp326Glyfs*15)		p.(Glu368Gly)			
			p.Ile65Thr					p.(Cys203Leufs*3)	p.(His264Leu)				p.(Trp326Ser)		p.(Leu369Val)		p.(Asn401Thrfs*51)	
			p.(Ile65Met)					p.(Cys203Tyr)	p.(Cys265Gly)				p.(Trp326*)		p.(Lys371Arg)		p.Ex12_13del	
			p.(Glu66Lys)					p.(Cys203Trp)	p.(Cys265Arg)				p.(Phe327Leu)		p.(Thr372Ser)		p.(Phe402Leu)	
			p.(Glu66*)					p.(Cys203Cys)	p.(Cys265Tyr)				p.(Thr328Ala)		p.(Ala373Hisfs*20)		p.(Phe402Ile)	
			p.(Glu66Alafs*8)					p.(Tyr204Cys)	p.(Thr266Pro)				p.(Glu330Asp)		p.Ala373Thr		p.(Phe402Val)	
			p.(Ser67Pro)					p.(Ex6-96A>G)	p.(Thr266Glu)				p.(Phe331Leu)		p.(Gln375Glu)		p.(Phe402Cys)	
			p.Arg68Gly					p.(Tyr204*)	p.(Thr266Ala)				p.(Phe331Cys)		p.(Gln375Arg)		p.Ala403Val	
			p.Arg68Ser					p.(Glu205Lys)	p.(Gln267Glu)				p.(Phe331Ser)		p.(Asn376Ilefs*24)		p.(Ile406Thr)	
			p.(Pro69_Ser70dup)					p.(Glu205Ala)	p.(Gln267*)				p.(Gly332Glu)		p.(Tyr377Thrfs*23)		p.(Ile406Met)	
			p.Pro69Ser			p.(Tyr154Phe)		p.(Tyr206Asp)	p.(Gln267Leu)				p.(Gly332Val)		p.(Tyr377Asp)		p.Pro407Ser	
			p.(Ser70Phefs*7)			p.(Gly148Trpfs*29)		p.(Tyr206Cys)	p.(Gln267Arg)				p.Leu333Phe		p.(Tyr377Cys)		p.(Pro407Leufs*45)	
			p.(Ser70del)			p.(Gly148Leufs*105)		p.(Tyr206*)	p.(Gln267His)				p.(Leu333Pro)		p.(Thr378Ser)		p.(Pro407Leu)	
			p.Ser70Pro			p.(Gly148Trpfs*29)		p.(Tyr206*)	p.(Tyr268His)				p.(Cys334Ser)		p.(Val379Ala)		p.(Arg408Glyfs*44)	
			p.(Ser70Phe)			p.(Gly148_Gln304del)		p.(Asn207Asp)	p.(Ile269Leu)				p.(Cys334*)		p.(Thr380Met)		p.Arg408Trp	
			p.(Arg71Cys)			p.(Ex5del4232ins268)		p.(Asn207Ser)	p.(Ile269Thrfs*72)				p.(Lys335Thr)		p.Phe382Leu		p.Arg408Gln	
			p.(Arg71His)			p.(Gly148Ser)		p.Pro211Thr	p.(Ile269Asn)				p.(Gln336*)		p.(Gln383*)		p.(Phe410Ser)	
			p.(Arg71Pro)			p.(Ex5del)		p.(Pro211Hisfs*130)	p.(Arg270Gly)				p.(Gln336Arg)		p.(Leu385Pro)		p.(Phe410Cys)	
			p.(Glu76*)			p.(Ex5_Ex6del)		p.(Pro211Leu)	p.(Arg270Lys)				p.(Gly337Val)		p.(Leu385Leu)		p.(Ser411*)	
			p.Glu76Gly			p.(Gly148Asp)		p.(Leu212Pro)	p.(Arg270Ile)		p.Asp282Asn		p.(Asp338Tyr)		p.(Tyr386Asp)		p.(Ser411*)	
			p.(Glu76Ala)			p.(Asp151His)		p.(Leu213Pro)	p.(His271Ilefs*10)		p.(Asp282Gly)	p.(Glu305_Thr323dup)	p.(Ile340Thr)		p.(Tyr386Cys)		p.(Val412Gly)	
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			p.(Tyr77*)			p.(Asp151Glu)		p.(Cys217Arg)	p.(His271Tyr)		p.(Ile283Asn)	p.Ile306Val	p.(Lys341Arg)		p.(Tyr387His)		p.(Arg413Cys)	
			p.(Glu78Lys)			p.(Tyr154His)		p.(Cys217Gly)	p.(His271Arg)		p.(Cys284Arg)	p.(Gly307Alafs*34)	p.(Lys341Thr)		p.(Tyr387*)		p.Arg413Ser	
		p.(Thr22Lys)	p.(Glu78Phefs*13)			p.(Tyr154Asn)		p.(Cys217Tyr)	p.(His271Leu)		p.(His285Tyr)	p.(Gly307Asp)	p.(Ala342Hisfs*58)		p.(Val388Glyfs*5)		p.Arg413Pro	
		p.(Asn28Asn)	p.(Thr81Valfs*6)			p.(Tyr154Cys)		p.Gly218Val	p.(His271Gln)		p.(Glu286Lys)	p.Leu308Phe	p.Ala342Thr		p.Val388Met		p.(Tyr414His)	
		p.(Leu37Pro)	p.(Thr81Pro)			p.(Arg155Cys)		p.(Phe219Ser)	p.(Gly272*)		p.(Leu287Val)	p.(Leu308Val)	p.(Ala342Pro)		p.(Val388Leu)		p.Tyr414Cys	
		p.(Ile38Aspfs*19)	p.(Asp84Tyr)			p.Arg155His		p.(Glu221Gly)	p.(Ser273Pro)		p.(Leu288Phe)	p.(Ala309Asp)	p.(Tyr343Asp)		p.(Val388Glyfs*5)		p.(Tyr414*)	
		p.(Ile38Aspfs*19)	p.(Lys85*)			p.(Arg155Pro)		p.Asp222*	p.(Ser273Phe)		p.(Gly289Arg)	p.Ala309Val	p.(Tyr343Cys)		p.(Val388Ala)		p.(Tyr414Tyr)	
		p.Phe39del	p.(Ser87Arg)			p.(Ala156Pro)		p.(Asp222*)	p.Lys274Glu		p.(His290Tyr)	p.(Leu311*)	p.(Tyr343Phe)		p.(Ala389Glufs*11)		p.(Asp415Tyr)	
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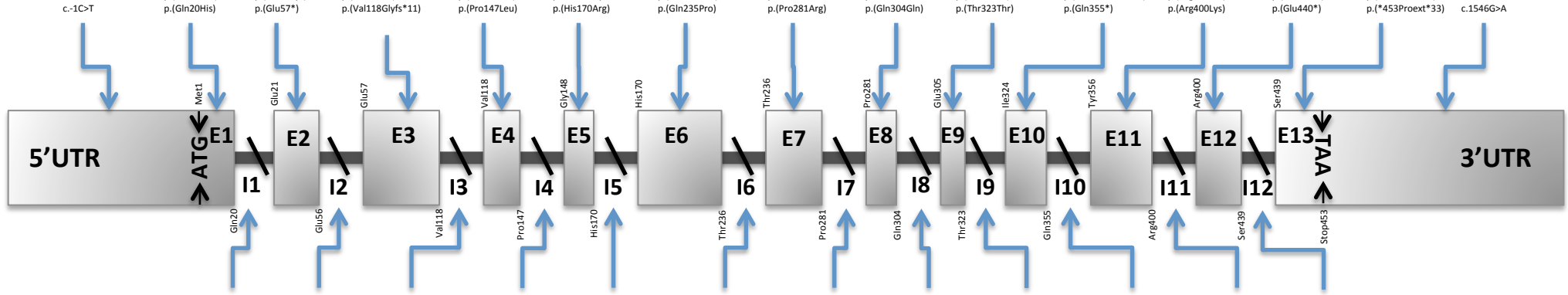
		p.Phe39Leu	p.(Pro89Ser)			p.(Arg157Ile)		p.(Asp222Val)	p.(Pro275Ser)		p.(His290Leu)	p.(Ser310Phe)	p.(Gly344Ser)		p.(Ala389Gly)		p.(Asp415Val)	
		p.(Ser40Leu)	p.(Ala90Cysfs*12)			p.(Arg157Lys)		p.(Asn223Lysfs*118)	p.(Pro275Ala)		p.(Pro292Leu)	p.(Leu311*)	p.(Gly344Asp)		p.Glu390Gly		p.(Pro416Thr)	
		p.Leu41Phe	p.Thr92Ile			p.Arg157Thr		p.Asn223Tyr	p.(Pro275Leu)		p.(Leu293Met)	p.(Leu311Glyfs*4)	p.(Gly344Val)		p.(Ser391Phefs*2)		p.Pro416Gln	
		p.(Leu41Pro)	p.(Asn93Serfs*5)			p.(Arg157Ser)		p.(Gln226Thrfs*118)	p.(Pro275Arg)		p.(Leu293Ser)	p.Leu311Pro	p.(Ala345Thr)		p.(Ser391Gly)		p.(Tyr417Asn)	
		p.Lys42Ile	p.(Ile94Ser)			p.(Arg158Trp)		p.(Ile224Thr)	p.(Met276Val)		p.(Ser295*)	p.(Gly312Arg)	p.(Ala345Ser)		p.(Ser391Ile)		p.(Tyr417Asp)	
		p.(Glu44del)	p.(Ile95Phe)			p.(Arg158Pro)		p.(Ile224Met)	p.(Met276Lys)		p.(Asp296Gly)	p.(Gly312Valfs*29)	p.(Gly346Arg)		p.(Ser391Thr)		p.(Tyr417His)	
		p.(Val45Ala)	p.(Ile95del)	p.(Trp120Glyfs*75)		p.Arg158Gln		p.(Pro225Ala)	p.(Met276Arg)		p.(Arg297Cys)	p.(Gly312Asp)	p.(Gly346Arg)		p.(Phe392Ile)		p.Tyr417Cys	
		p.Gly46Ser	p.(Ile95Thr)	p.(Trp120*)		p.(Gln160Pro)		p.(Pro225Thr)	p.(Met276Ile)		p.(Arg297His)	p.(Gly312Val)	p.(Gly346Glu)		p.(Phe392Ile)		p.(Thr418Pro)	
	p.(Ex1del)	p.(Gly46Arg)	p.(Ile97Leu)	p.(Phe121Leu)		p.Phe161Ser		p.(Pro225Leu)	p.Tyr277Asp		p.Arg297Leu	p.Ala313Thr	p.(Leu347Serfs*53)		p.(Phe392Ser)		p.(Thr418Asn)	
	p.(Ex1_Ex2del)	p.(Gly46Valfs*15)	p.(Leu98Ser)	p.(Phe121Ser)		p.(Ile164Val)		p.(Pro225Arg)	p.(Tyr277Cys)		p.(Phe299del)	p.(Ala313Val)	p.(Leu347Phe)		p.(Asn393Ilefs*2)		p.Gln419Arg	
	p.(Met1Val)	p.(Ala47Glu)	p.(His100Arg)	p.(Pro122Ser)		p.(Ile164Thr)		p.(Gln226*)	p.(Thr278Ala)		p.Phe299Cys	p.(Pro314Ser)	p.Leu348Val		p.(Asp394His)		p.(Gln419Pro)	
	p.(Met1Leu)	p.Ala47Val	p.(Ile102Thr)	p.Pro122Gln		p.(Ala165Pro)		p.(Gln226His)	p.(Thr278Ser)		p.(Phe299Ser)	p.(Pro314Thr)	p.(Leu348Argfs*2)		p.(Asp394Tyr)		p.(Ile421Ser)	
	p.(Met1Ile)	p.Leu48Ser	p.(Gly103Ser)	p.(Arg123Ile)		p.(Ala165Thr)		p.(Leu227Gln)	p.Thr278Ile		p.Ala300Ser	p.(Pro314Leufs*27)	p.(Leu348Pro)		p.(Asp394Ala)		p.(Ile421Thr)	
	p.(Met1Arg)	p.(Leu52Cysfs*9)	p.(Gly103Cys)	p.Thr124Ile		p.(Ala165Asp)		p.(Glu228Lys)	p.(Thr278Asn)		p.(Ala300Val)	p.Pro314His	p.(Ser350Valfs*5)		p.Ala395Pro		p.(Glu422Lys)	
	p.(Gly10Gly)	p.Leu52Ser	p.Ala104Asp	p.(Asp129Tyr)		p.(Tyr166*)		p.(Glu228*)	p.(Pro279Leu)		p.(Gln301*)	p.Asp315Tyr	p.(Ser349Ala)		p.(Ala395Asp)		p.(Leu424Wfs*28)	
	p.(Leu15Glnfs*24)	p.(Arg53Cys)	p.(Val106Ala)	p.(Asp129Val)		p.(Tyr166*)		p.(Asp229Gly)	p.(Glu280Asnfs*61)		p.(Gln301Pro)	p.(Tyr317His)	p.Ser349Pro		p.(Ala395Gly)		p.(Leu424Ser)	
	p.(Ser16Pro)	p.Arg53His	p.(His107Arg)	p.(Asp129Gly)		p.(Asn167Tyr)		p.Val230Ile	p.(Thr263Metfs*60)		p.(Gln301His)	p.(Ile318Thr)	p.(Ser349Leu)		p.(Lys396Arg)		p.(Leu424*)	
	p.(Ser16*)	p.(Leu54Ser)	p.(Glu108Aspfs*4)	p.(Ala132Val)		p.(Asn167Ser)		p.(Val230Ala)	p.(Glu280Gln)		p.(Ser303Profs*38)	p.(Lys320Asn)	p.(Ser349*)		p.(Lys398Lys)		p.(Asn426Asn)	
c.-27778delPAH	p.(Asp17Leufs*22)	p.(Phe55del)	p.(Ser110Leu)	p.(Asn133Argfs*61)		p.(Asn167Ile)		p.(Val230Gly)	p.Glu280Lys		p.(Ex9_11del)	p.(Leu321Leu)	p.(Ser350Thr)		p.Lys398Asn		p.(Gln428Serfs*24)	
c.-4171_-405del	p.(Ser16Tyr)	p.(Phe55Ser)	p.(Arg111*)	p.(Gln134*)		p.(Tyr168His)		p.(Ser231Pro)	p.(Glu280Aspfs*3)		p.(Ser303Profs*38)	p.(Ala322Thr)	p.(Ser350Tyr)		p.(Val399Glyfs*52)		p.(Leu430Pro)	
c.-4137_-407del3767	p.(Asp17*)	p.(Phe55Leufs*6)	p.Lys113Argfs*81	p.(Ser137Ser)		p.(Tyr168Serfs*27)		p.(Ser231Phe)	p.(Glu280Gly)		p.(Ser303Ala)	p.(Ala322Val)	p.(Gly352Arg)		p.(Val399Ala)		p.(Ala434Asp)	
c.-224G>A	p.(Asp17Leufs*22)	p.(Phe55Leu)	p.(Lys115Argfs*81)	p.Asp143Gly		p.(Tyr168*)		p.(Gln232*)	p.Glu280Ala		p.(Ser303Pro)	p.Ala322Gly	p.(Gly352Cys)		p.Val399Val		p.(Ala434Val)	p.(Glu440*)
c.-147C>T	p.(Gly19Glyfs)	p.(Glu56Asp)	p.(Lys115Thrfs*79)	p.(Asp145Val)		p.(Arg169Cys)		p.(Gln232Gln)	p.(Pro281Ser)		p.(Gln304*)	p.(Ala322Asp)	p.(Gly352Valfs*48)		p.(Arg400Glyfs*52)		p.(Ser436Profs*16)	p.(Ala447Pro)
c.-81C>T	p.(Gln20*)	p.(Glu56Glu)	p.(Thr117Lysfs*78)	p.(His146Tyr)		p.(Arg169His)		p.(Phe233Ile)	p.(Pro281Ala)		p.(Gln304Arg)	p.(Thr323del)	p.(Glu353Asnfs*47)		p.(Arg400Arg)		p.(Asn438Asp)	p.(Ala447Asp)
c.-71A>C	p.(Gln20Leu)	p.(Glu57Lys)	p.(Thr117Ile)	p.(Pro147Ser)		p.His170Asp		p.(Phe233Leu)	p.Pro281Leu		p.Gln304Pro	p.(Thr323Ile)	p.(Glu353Asnfs*47)		p.(Arg400Thr)		p.(Asn438fs)	p.(*453Vext*35)
c.-1C>T	p.(Gln20His)	p.(Glu57*)	p.(Val118Glyfs*11)	p.(Pro147Leu)		p.(His170Arg)		p.(Gln235Pro)	p.(Pro281Arg)		p.(Gln304Gln)	p.(Thr323Thr)	p.(Gln355*)		p.(Arg400Lys)		p.(Glu440*)	p.(*453Proext*33)

c.1503A>G
c.1546G>A



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c.60+5G>C
c.60+40T>G
c.60+62C>T

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c.168+2T>C
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c.168+19T>C
c.169-13T>G
c.169-2A>G

c.352+1G>A
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c.353-1G>C
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c.1199+2T>C
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c.1200-1delG

c.1315+1G>A
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c.1315+4A>G
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c.1316-15T>C
c.1316-5T>C

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