

SEQUENCE LISTING

<110> INTEGRAGEN

<120> Human diabetes susceptibility BTBD9 gene

<130> B0527

<160> 22

<170> PatentIn version 3.3

<210> 1

<211> 618

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(618)

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atg	gag	aat	gtt	gca	aca	att	gct	gat	tgt	gcc	agt	gtg	att	gaa	gga	96
Met	Glu	Asn	Val	Ala	Thr	Ile	Ala	Asp	Cys	Ala	Ser	Val	Ile	Glu	Gly	
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gtc	agt	cgg	agc	cga	aat	gcc	ttg	ctg	aat	ggg	gac	act	aag	aat	tat	144
Val	Ser	Arg	Ser	Arg	Asn	Ala	Leu	Leu	Asn	Gly	Asp	Thr	Lys	Asn	Tyr	
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gac	tgg	gat	tct	ggc	tac	aca	tgt	cac	cag	cta	gga	agt	ggg	gcg	att	192
Asp	Trp	Asp	Ser	Gly	Tyr	Thr	Cys	His	Gln	Leu	Gly	Ser	Gly	Ala	Ile	
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Val	Val	Gln	Leu	Ala	Gln	Pro	Tyr	Met	Ile	Gly	Ser	Ile	Arg	Leu	Leu	
65					70					75					80	

ctt	tgg	gat	tgt	gat	gat	cga	agc	tat	agc	tac	tac	gtt	gag	gtt	tct	288
Leu	Trp	Asp	Cys	Asp	Asp	Arg	Ser	Tyr	Ser	Tyr	Tyr	Val	Glu	Val	Ser	
			85					90						95		

acc	aac	cag	caa	cag	tgg	acc	atg	gtt	gct	gac	aga	act	aaa	gtc	tcc	336
Thr	Asn	Gln	Gln	Gln	Trp	Thr	Met	Val	Ala	Asp	Arg	Thr	Lys	Val	Ser	
			100					105					110			

tgc	aag	tcc	tgg	cag	tca	gta	act	ttt	gaa	agg	cag	cct	gcc	tcc	ttc	384
Cys	Lys	Ser	Trp	Gln	Ser	Val	Thr	Phe	Glu	Arg	Gln	Pro	Ala	Ser	Phe	
		115					120					125				

atc	cgt	atc	gtt	ggg	aca	cac	aac	aca	gca	aat	gag	gtg	ttc	cac	tgt	432
Ile	Arg	Ile	Val	Gly	Thr	His	Asn	Thr	Ala	Asn	Glu	Val	Phe	His	Cys	
	130					135					140					

gtc	cac	ttt	gag	tgt	cca	gag	cag	cag	agc	agc	cag	aag	gag	gaa	aat	480
Val	His	Phe	Glu	Cys	Pro	Glu	Gln	Gln	Ser	Ser	Gln	Lys	Glu	Glu	Asn	

145	150	155	160	
agt gag gaa tcg ggg aca ggg gac acc agc ctg gcc ggt cag cag ctc				528
Ser Glu Glu Ser Gly Thr Gly Asp Thr Ser Leu Ala Gly Gln Gln Leu				
	165	170	175	
gac tcc cat gcg ctg cgg gcg cct agt ggc agc tca cta ccc tcc agc				576
Asp Ser His Ala Leu Arg Ala Pro Ser Gly Ser Ser Leu Pro Ser Ser				
	180	185	190	
cca ggc tcc aac tca cgc tcc ccc aac cgg cag cac caa taa				618
Pro Gly Ser Asn Ser Arg Ser Pro Asn Arg Gln His Gln				
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35 40 45

Asp Trp Asp Ser Gly Tyr Thr Cys His Gln Leu Gly Ser Gly Ala Ile
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Val Val Gln Leu Ala Gln Pro Tyr Met Ile Gly Ser Ile Arg Leu Leu
65 70 75 80

Leu Trp Asp Cys Asp Asp Arg Ser Tyr Ser Tyr Tyr Val Glu Val Ser
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Thr Asn Gln Gln Gln Trp Thr Met Val Ala Asp Arg Thr Lys Val Ser
100 105 110

Cys Lys Ser Trp Gln Ser Val Thr Phe Glu Arg Gln Pro Ala Ser Phe
115 120 125

Ile Arg Ile Val Gly Thr His Asn Thr Ala Asn Glu Val Phe His Cys
130 135 140

Val His Phe Glu Cys Pro Glu Gln Gln Ser Ser Gln Lys Glu Glu Asn
145 150 155 160

Ser Glu Glu Ser Gly Thr Gly Asp Thr Ser Leu Ala Gly Gln Gln Leu
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 195 200 205

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 gcagtgcag atgaagacag gctgatagat atgtgcacaca gcaagcagag taacatactt 540
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gaaggcaggg ttttaaggcag cagtataaag aaaggaagac tttacagaca cccaggaaga 240
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 <223> SNP72=C/G

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 gcacagcacc gagctcagcg ccccgcaagc aagggttaagc catggccctg acctggagag 180
 tagacaacgt gcttcggggg gtcttgacat gcatgtgtga gctgtggggg gcaggagaga 240
 agggcggggt gggggctgtc gttgccactg cacgagcatg tgtgcacata catacacag 300
 sccttctacc gtagaatcaa gttcacagag acaaatgtag tatcaactgc agaattatat 360

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aattcattta ttgaccactg ttttaaattt cacatcttct catatgaaga ctgagaccgt 480
gtcttcctgg tgtgtccact ctgttttggg agctgccatt ttctcttaga gggagctgat 540
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atcatttcat ggcctaccag taaaaacttc acatctacag caactgcccc tctattactg 300
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tcccaaaaga aacaggcaaa aaggtaaadc agcacctgct ttctgtaat caccagcca 420
cctcctgtcc aaaagcctcc cccagggag ccaccaccac catctgccct tcagtctgag 480
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<223> SNP75=A/G

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ttgtgtccag gttcagatct gggaaacaaa gaactgtgag atgagagatg gctgtgccaa 180
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rcaactcact tgcttttttag ttttgtcttc ataaattgca cacttgtctg tgatttggac 360
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 tgcactcagg gaagcacaag gatctatagt ttctgaccag atattttacag ttctcccagg 240
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 taaaaaggat atcacaatta gcaagtagaa agataataag tcttaaaacta aggcgacaga 540
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caggagtttg agaccagcct ggtgaacagg gtaaaaccct aactctacta aaaatacaaa 180
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cagcctgggt gacaaagcga gactccatct caaaacaaca acaacaaca caacaacaaa 360
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caaacattgt tgcagaagag aggcaaaaga gtacactcct ctttcttcta tagaacaagg 240
atgatgggtga ccacatatga agacgatgat agtaccacag tgccatgttt actactggta 300
wttgttgcca agtcttgatt catccttgat aatttctgtt ccatccacct ctctttttca 360

```

```

ttcccatctg acactgactg ttctatgaac tgcactctga aaagtaacca tcaaatttct 420
aataatcaaa accagtgggc attgatcctt gggtttgcaa agtttttagtt catgtacctg 480
aaaaatactg tctgtagtgt acttgaggag agaagactct gatataatattt acaatgtgag 540
catcttaaga actacaaatt ttttaaagtc ctcatctctt gaaaacttta aaaagtcctc 600
a 601

```

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<210> 19
<211> 713
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (513)..(513)
<223> SNP86=A/C

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<400> 19
acatttttct aaagatgcaa atcagccagg cgcagtgggt cacacctgta accatagtac 60
tttgggaggg tgaggtgaga gggctgcttg agcccaggag ttcaagacca gcctgagtaa 120
cacagggaga ctctgtcact aaaaaaaaaa aattaaatta aattagctgg gcacgggtggc 180
acacacatgt agtcccaacc actcaggagg ctggggcagg aggactgctt tagcccagga 240
ggttgaggct gcagcaggac atgatcacac cactgcactg cactgcagcc tgggtgacag 300
agcaagaccc tgtctcttaa aaaaaaaaaa aaaaagagag agagagatgg aaatcagctt 360
caggaaaatg agagggtaaa gggaaaaagg actcaatgga caatttttaa aattcgggct 420
tttggcta at ggtcattcca attaaaatgc aaatgaatga ggcttctagc ttttgccagc 480
ttgccaagta ccctatgact tactagtggc aamagccatc atgccttccc ttgctacgtt 540
agtgtctaaa acaatgcctt aaaagcttaa gagagctggg ggcagacagc aaagtagcca 600
gggcctagcc acatgctctc accaagatcc accctgaagg tgaaaacttt caagcagggg 660
agcaaaggta ccagcatgcc cccttatcaa catgggaaat acctttttct caa 713

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<210> 20
<211> 691
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (491)..(491)
<223> SNP90=A/G

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```

<400> 20

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gagaaaaaaa aaagctcttc aaaaaataca aagtgctggc tgggtacagt ggctcatgcc      60
tgtaaactca gcactttggg aggccgagac aggtggattg cttgagtaca ggagtttgag      120
accatcctgg ccaacatggc aaaaccccat ctctactaaa aatacaaaaa attagctgag      180
cgtggtagta catgtotata atcccagcta cctgggcagc caaggcagga gaatcacttg      240
aacctgggag gtggaggctg cagtgaacca agatcatgcc actgcactcc agcctggatg      300
acagagcaag actctgtctt gaaaaaaciaa ggtgataaag attaaacaag atagtagata      360
atcataatth tttacacata atttttaatg cataatatta agctttgaaa ttctacagct      420
aggtagagat tgctaattat tagaaggaaa aattaaggag aaatgaagca gaatgtaccc      480
ctagctacac rgtgccaaaa tctgagagga gtgctgggtt aattaccttg tgcttttctt      540
tcattgcttt atgtttotaa ttatctttta tgaactctc tattacatgt aggttgacat      600
ggtcattcgc cccagtggat tatttgatc cagacttagt tctcttccca aagcaatcta      660
cttacccaat tctgtcacct aaatcatttt c                                     691

```

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<210> 21
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (301)..(301)
<223> SNP91=A/T

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<400> 21
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ttgtgagata agtgtttgga ttgtccataa gcaatagaaa ttgatttagt gactaagaca      120
gaaatggcaa gcagaagggc tatgtattat ctccacagag aaaaagtaat taacaacttg      180
aaggcaagga cataaagttc attacattaa aactggcaag agaaaaaaaa agttcattac      240
actaagacag gtaaatacaga tacctgggta gcatggccta ctaggacatt ccatctgata      300
watcccaact aaagatcttc acctaagaga gtttcagtct gactttttct agacttaagg      360
cagattttcc cagatgcaaa gtgttcttca atttgccct actgactgtc ctggagtcta      420
aacttgctga tcttcacagc atagggaag ggtaatgtat tactcaaac tgttgacctca      480
aggtgggagg aagaacagta ggaaggcagg gggacgaagg acttactactg agaatggaca      540
ggaatatctc aactaggaaa tggtagcttt cacgggtacca tacacaatta ttagtttttg      600
a                                     601

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<210> 22

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<211> 601
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (301)..(301)
 <223> SNP93=A/G

<400> 22
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 catcttggtt agcaattcaa cttcaggttt acataccact caaaagaatt ttcacataac 120
 agaagatggt ataaataaag accaagggtt caatattcag cagcagggtc tttaattatt 180
 ctgaaatctc tttggtcagt atttttaagc atcgttcatc agaaagactc ctttcccaac 240
 taacatttgt atattttaca ggatcagcag taaagacaaa cctcagagag ataatcccaa 300
 rcaaaactat gtcactgagt gtgactggat gactattggt acatcatttc agtaaatttc 360
 caatacaatg gccaagtac atcaggtaga ttttagataa tgagacatgc accactgact 420
 acctaaaata catgcacatt agtgaggcat cgattccaat tagtaattga aatcaaaagt 480
 atattaacaa cctgatattg gttcaagcgt aatatccttt actttcaagt aaggataaca 540
 cttattcttg tcaaagactg tactctgatt aatacaacct ctatcccacc ttacaagaag 600
 g 601