

SEQUENCE LISTING

<110> Singapore Health Services Pte. Ltd.
 <120> METHODS OF DIAGNOSING LIVER CANCER IN A SUBJECT AND A KIT FOR
 DIAGNOSING LIVER CANCER
 <130> P0305-WO
 <150> US 61/704425
 <151> 2012-09-21
 <160> 21
 <170> PatentIn version 3.5
 <210> 1
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 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> forward primer for NFKBIZ
 <400> 1
 tcctgttgca catccgaagt c 21
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 <212> DNA
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 <223> reverse primer for NFKBIZ
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 tccatcagac aacgaatcgg g 21
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 gggtcgctct ccggccattc 20
 <210> 4
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 caggctcccg cttgttctgg g 21

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 gtgcagctga gtcattggagc tt 22

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 tgcactctgc aggacccgga 20

<210> 10
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<212> DNA
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 <220>
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 tgtagccgtg caaacttaca agtga 25

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 gccattgtag ttggtagcct tca 23

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 gtcttcgagt ctaaactcag cac 23

<210> 14
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 tgggtgtgtc aatcacctca a 21

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 ttgtcctcag tttcgggaga t 21

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 ttctcgacac cagttgagtt tc 22

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 gcccaatacg gcagtatgag 20

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 <220>
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 <400> 18
 cctgctccgg ttttaccac 20

 <210> 19
 <211> 790
 <212> PRT
 <213> Homo sapiens

 <400> 19

 Met Ala Glu Gln Val Leu Pro Gln Ala Leu Tyr Leu Ser Asn Met Arg
 1 5 10 15

 Lys Ala Val Lys Ile Arg Glu Arg Thr Pro Glu Asp Ile Phe Lys Pro
 20 25 30

 Thr Asn Gly Ile Ile His His Phe Lys Thr Met His Arg Tyr Thr Leu
 35 40 45

 Glu Met Phe Arg Thr Cys Gln Phe Cys Pro Gln Phe Arg Glu Ile Ile

50	55	60
His Lys Ala Leu Ile Asp Arg Asn Ile Gln Ala Thr Leu Glu Ser Gln 65 70 75 80		
Lys Lys Leu Asn Trp Cys Arg Glu Val Arg Lys Leu Val Ala Leu Lys 85 90 95		
Thr Asn Gly Asp Gly Asn Cys Leu Met His Ala Thr Ser Gln Tyr Met 100 105 110		
Trp Gly Val Gln Asp Thr Asp Leu Val Leu Arg Lys Ala Leu Phe Ser 115 120 125		
Thr Leu Lys Glu Thr Asp Thr Arg Asn Phe Lys Phe Arg Trp Gln Leu 130 135 140		
Glu Ser Leu Lys Ser Gln Glu Phe Val Glu Thr Gly Leu Cys Tyr Asp 145 150 155 160		
Thr Arg Asn Trp Asn Asp Glu Trp Asp Asn Leu Ile Lys Met Ala Ser 165 170 175		
Thr Asp Thr Pro Met Ala Arg Ser Gly Leu Gln Tyr Asn Ser Leu Glu 180 185 190		
Glu Ile His Ile Phe Val Leu Cys Asn Ile Leu Arg Arg Pro Ile Ile 195 200 205		
Val Ile Ser Asp Lys Met Leu Arg Ser Leu Glu Ser Gly Ser Asn Phe 210 215 220		
Ala Pro Leu Lys Val Gly Gly Ile Tyr Leu Pro Leu His Trp Pro Ala 225 230 235 240		
Gln Glu Cys Tyr Arg Tyr Pro Ile Val Leu Gly Tyr Asp Ser His His 245 250 255		
Phe Val Pro Leu Val Thr Leu Lys Asp Ser Gly Pro Glu Ile Arg Ala 260 265 270		
Val Pro Leu Val Asn Arg Asp Arg Gly Arg Phe Glu Asp Leu Lys Val 275 280 285		
His Phe Leu Thr Asp Pro Glu Asn Glu Met Lys Glu Lys Leu Leu Lys 290 295 300		

Glu Tyr Leu Met Val Ile Glu Ile Pro Val Gln Gly Trp Asp His Gly
 305 310 315 320
 Thr Thr His Leu Ile Asn Ala Ala Lys Leu Asp Glu Ala Asn Leu Pro
 325 330 335
 Lys Glu Ile Asn Leu Val Asp Asp Tyr Phe Glu Leu Val Gln His Glu
 340 345 350
 Tyr Lys Lys Trp Gln Glu Asn Ser Glu Gln Gly Arg Arg Glu Gly His
 355 360 365
 Ala Gln Asn Pro Met Glu Pro Ser Val Pro Gln Leu Ser Leu Met Asp
 370 375 380
 Val Lys Cys Glu Thr Pro Asn Cys Pro Phe Phe Met Ser Val Asn Thr
 385 390 395 400
 Gln Pro Leu Cys His Glu Cys Ser Glu Arg Arg Gln Lys Asn Gln Asn
 405 410 415
 Lys Leu Pro Lys Leu Asn Ser Lys Pro Gly Pro Glu Gly Leu Pro Gly
 420 425 430
 Met Ala Leu Gly Ala Ser Arg Gly Glu Ala Tyr Glu Pro Leu Ala Trp
 435 440 445
 Asn Pro Glu Glu Ser Thr Gly Gly Pro His Ser Ala Pro Pro Thr Ala
 450 455 460
 Pro Ser Pro Phe Leu Phe Ser Glu Thr Thr Ala Met Lys Cys Arg Ser
 465 470 475 480
 Pro Gly Cys Pro Phe Thr Leu Asn Val Gln His Asn Gly Phe Cys Glu
 485 490 495
 Arg Cys His Asn Ala Arg Gln Leu His Ala Ser His Ala Pro Asp His
 500 505 510
 Thr Arg His Leu Asp Pro Gly Lys Cys Gln Ala Cys Leu Gln Asp Val
 515 520 525
 Thr Arg Thr Phe Asn Gly Ile Cys Ser Thr Cys Phe Lys Arg Thr Thr
 530 535 540
 Ala Glu Ala Ser Ser Ser Leu Ser Thr Ser Leu Pro Pro Ser Cys His
 545 550 555 560

Gln Arg Ser Lys Ser Asp Pro Ser Arg Leu Val Arg Ser Pro Ser Pro
565 570 575

His Ser Cys His Arg Ala Gly Asn Asp Ala Pro Ala Gly Cys Leu Ser
580 585 590

Gln Ala Ala Arg Thr Pro Gly Asp Arg Thr Gly Thr Ser Lys Cys Arg
595 600 605

Lys Ala Gly Cys Val Tyr Phe Gly Thr Pro Glu Asn Lys Gly Phe Cys
610 615 620

Thr Leu Cys Phe Ile Glu Tyr Arg Glu Asn Lys His Phe Ala Ala Ala
625 630 635 640

Ser Gly Lys Val Ser Pro Thr Ala Ser Arg Phe Gln Asn Thr Ile Pro
645 650 655

Cys Leu Gly Arg Glu Cys Gly Thr Leu Gly Ser Thr Met Phe Glu Gly
660 665 670

Tyr Cys Gln Lys Cys Phe Ile Glu Ala Gln Asn Gln Arg Phe His Glu
675 680 685

Ala Lys Arg Thr Glu Glu Gln Leu Arg Ser Ser Gln Arg Arg Asp Val
690 695 700

Pro Arg Thr Thr Gln Ser Thr Ser Arg Pro Lys Cys Ala Arg Ala Ser
705 710 715 720

Cys Lys Asn Ile Leu Ala Cys Arg Ser Glu Glu Leu Cys Met Glu Cys
725 730 735

Gln His Pro Asn Gln Arg Met Gly Pro Gly Ala His Arg Gly Glu Pro
740 745 750

Ala Pro Glu Asp Pro Pro Lys Gln Arg Cys Arg Ala Pro Ala Cys Asp
755 760 765

His Phe Gly Asn Ala Lys Cys Asn Gly Tyr Cys Asn Glu Cys Phe Gln
770 775 780

Phe Lys Gln Met Tyr Gly
785 790

<210> 20

<211> 252

<212> PRT

<213> Homo sapiens

<400> 20

Met Arg Ala Pro Leu Leu Pro Pro Ala Pro Val Val Leu Ser Leu Leu
 1 5 10 15

Ile Leu Gly Ser Gly His Tyr Ala Ala Gly Leu Asp Leu Asn Asp Thr
 20 25 30

Tyr Ser Gly Lys Arg Glu Pro Phe Ser Gly Asp His Ser Ala Asp Gly
 35 40 45

Phe Glu Val Thr Ser Arg Ser Glu Met Ser Ser Gly Ser Glu Ile Ser
 50 55 60

Pro Val Ser Glu Met Pro Ser Ser Ser Glu Pro Ser Ser Gly Ala Asp
 65 70 75 80

Tyr Asp Tyr Ser Glu Glu Tyr Asp Asn Glu Pro Gln Ile Pro Gly Tyr
 85 90 95

Ile Val Asp Asp Ser Val Arg Val Glu Gln Val Val Lys Pro Pro Gln
 100 105 110

Asn Lys Thr Glu Ser Glu Asn Thr Ser Asp Lys Pro Lys Arg Lys Lys
 115 120 125

Lys Gly Gly Lys Asn Gly Lys Asn Arg Arg Asn Arg Lys Lys Lys Asn
 130 135 140

Pro Cys Asn Ala Glu Phe Gln Asn Phe Cys Ile His Gly Glu Cys Lys
 145 150 155 160

Tyr Ile Glu His Leu Glu Ala Val Thr Cys Lys Cys Gln Gln Glu Tyr
 165 170 175

Phe Gly Glu Arg Cys Gly Glu Lys Ser Met Lys Thr His Ser Met Ile
 180 185 190

Asp Ser Ser Leu Ser Lys Ile Ala Leu Ala Ala Ile Ala Ala Phe Met
 195 200 205

Ser Ala Val Ile Leu Thr Ala Val Ala Val Ile Thr Val Gln Leu Arg
 210 215 220

Arg Gln Tyr Val Arg Lys Tyr Glu Gly Glu Ala Glu Glu Arg Lys Lys
 225 230 235 240

Leu Arg Gln Glu Asn Gly Asn Val His Ala Ile Ala
245 250

<210> 21
<211> 408
<212> PRT
<213> Homo sapiens

<400> 21

Met Asn Asn Met Leu Asp Ile Trp Gln Ser Arg Leu Gln Glu His Ile
1 5 10 15

Lys Glu Thr Arg Thr Tyr Met Lys Tyr Met Leu Asn Asp His Leu Val
20 25 30

Ile Val Leu Ile Phe Phe Leu Ala Gly Ala Ala Ser Trp Tyr Ser Lys
35 40 45

Trp Ile Arg Asp Ile Pro Ala His Phe Pro Ser Phe Trp Val Met Ala
50 55 60

Val Leu Phe Ser Leu Val Leu Thr Ser Ser Tyr Val Arg Thr Leu Leu
65 70 75 80

Lys Glu Ala Asp Leu Val Phe Leu Leu Pro Leu Glu Ala Lys Met Glu
85 90 95

Pro Tyr Leu Lys Gln Ala Phe Val Tyr Ser Tyr Val Ser Gln Leu Phe
100 105 110

Pro Leu Ile Ala Leu Ser Ile Val Ala Met Pro Leu Tyr Phe Ala Val
115 120 125

Thr Pro Gly Ala Ser Leu Val Ser Tyr Ala Ala Val Phe Val Gln Leu
130 135 140

Leu Leu Leu Lys Ala Trp Asn Gln Val Met Glu Trp Arg Thr Thr Phe
145 150 155 160

Gln Asn Asp Arg Ser Met Lys Arg Met Asp Val Ile Ile Arg Phe Ala
165 170 175

Ala Asn Thr Leu Val Leu Tyr Phe Val Phe Gln Ser Val Tyr Met Tyr
180 185 190

Ala Leu Leu Val Tyr Val Ile Met Ala Val Leu Tyr Leu Tyr Met Ser
195 200 205

Ser Ala Ala Lys Arg Lys Thr Phe Lys Trp Glu Ser His Ile Glu Ser
 210 215 220

Glu Leu Arg Arg Lys Gln Arg Phe Tyr Arg Ile Ala Asn Leu Phe Thr
 225 230 235 240

Asp Val Pro His Leu Arg Lys Gln Ala Lys Arg Arg Ala Tyr Leu Asp
 245 250 255

Phe Leu Leu Arg Leu Val Pro Phe Glu Gln Arg Lys Thr Phe Ala Tyr
 260 265 270

Met Phe Thr Arg Ala Phe Leu Arg Ser Ser Asp Tyr Leu Gly Ile Leu
 275 280 285

Val Arg Leu Thr Ile Val Phe Ala Leu Ile Ile Met Tyr Val Ser Ala
 290 295 300

Ser Pro Leu Ile Ala Ala Val Leu Thr Val Phe Ala Ile Phe Ile Thr
 305 310 315 320

Gly Ile Gln Leu Leu Pro Leu Phe Gly His Phe Asp His Leu Ala Leu
 325 330 335

Gln Glu Leu Tyr Pro Val Gln Lys Glu Thr Lys Leu Lys Ser Tyr Phe
 340 345 350

Ser Leu Leu Lys Thr Ala Leu Ser Ile Gln Ala Leu Leu Met Ser Val
 355 360 365

Ala Ser Ala Tyr Ala Ala Gly Leu Thr Gly Phe Leu Tyr Ala Leu Ile
 370 375 380

Gly Ser Ala Val Leu Ile Phe Val Val Leu Pro Ala Tyr Met Thr Thr
 385 390 395 400

Arg Leu Lys Lys His Gly Lys Leu
 405