

PCT56013_SeqList_ApplNo._notyetassigned.txt
SEQUENCE LISTING

<110> Max Planck Gesellschaft zur Förderung der Wissenschaften
e.V.

<120> MZB1, a novel B cell factor, and uses thereof

<130> PCT56013FZapu

<140> not yet assigned

<141> herewith

<150> EP 08 006 376.1

<151> 2008-03-31

<160> 21

<170> PatentIn version 3.3

<210> 1

<211> 564

<212> DNA

<213> mouse

<220>

<223> full length MZB1 coding sequence

<400> 1

```
atgagactgc ctctgccact gttgctactg ttcgggtgca gggctatcct ggggagcgcc      60
ggggataggg tttccctctc ggcttcggct cccacactgg atgatgaaga gaagtactcg      120
gctcatatgc cggctcacct gcgctcgat gcctgccggg ctgtggcctt ccagatgggg      180
caacgtctgg cgaaagcaga ggctaaatct cacactccag acgccagtgg attgcaggag      240
ctgagtgaat ccacgtacac agatgtcctg gaccagacct gctctcagaa ctggcagtcc      300
tatggagttc atgaagtga cagatgaag cgtctcacgg gcccaggact tagcaagggg      360
ccagagccaa gaatcagcgt gatgatttct ggggggtcct ggcccaatag gctctccaag      420
acgtgtttcc actacctggg tgagtttgga gaggaccaga tctatgaagc ctaccgccaa      480
ggccaagcga atctggaggc gctgctctgt gggggcaccc atgggccctg ctcacaggag      540
atcctggccc agagagaaga gctt                                           564
```

<210> 2

<211> 188

<212> PRT

<213> mouse

<220>

<223> full length MZB1 amino acid sequence

<400> 2

```
Met Arg Leu Pro Leu Pro Leu Leu Leu Phe Gly Cys Arg Ala Ile
1           5           10           15
```

```
Leu Gly Ser Ala Gly Asp Arg Val Ser Leu Ser Ala Ser Ala Pro Thr
                20                25                30
```

```
Leu Asp Asp Glu Glu Lys Tyr Ser Ala His Met Pro Ala His Leu Arg
```

35

40

45

Cys Asp Ala Cys Arg Ala Val Ala Phe Gln Met Gly Gln Arg Leu Ala
50 55 60

Lys Ala Glu Ala Lys Ser His Thr Pro Asp Ala Ser Gly Leu Gln Glu
65 70 75 80

Leu Ser Glu Ser Thr Tyr Thr Asp Val Leu Asp Gln Thr Cys Ser Gln
85 90 95

Asn Trp Gln Ser Tyr Gly Val His Glu Val Asn Gln Met Lys Arg Leu
100 105 110

Thr Gly Pro Gly Leu Ser Lys Gly Pro Glu Pro Arg Ile Ser Val Met
115 120 125

Ile Ser Gly Gly Pro Trp Pro Asn Arg Leu Ser Lys Thr Cys Phe His
130 135 140

Tyr Leu Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala Tyr Arg Gln
145 150 155 160

Gly Gln Ala Asn Leu Glu Ala Leu Leu Cys Gly Gly Thr His Gly Pro
165 170 175

Cys Ser Gln Glu Ile Leu Ala Gln Arg Glu Glu Leu
180 185

<210> 3
<211> 510
<212> DNA
<213> mouse

<220>
<223> mature MZB1 coding sequence

<400> 3
agcgcgcggg atagggtttc cctctcggct tcggctccca cactggatga tgaagagaag 60
tactcggctc atatgccggc tcacctgcgc tgcgatgcct gccgggctgt ggccttccag 120
atggggcaac gtctggcgaa agcagaggct aaatctcaca ctccagacgc cagtggattg 180
caggagctga gtgaatccac gtacacagat gtcctggacc agacctgctc tcagaactgg 240
cagtcctatg gagttcatga agtgaaccag atgaagcgtc tcacgggccc aggacttagc 300
aaggggccag agccaagaat cagcgtgatg atttctgggg gtccctggcc caataggctc 360
tccaagacgt gtttccacta cctgggtgag tttggagagg accagatcta tgaagcctac 420
cgccaaggcc aagcgaatct ggaggcgtg ctctgtgggg gcacccatgg gccctgctca 480
caggagatcc tggcccagag agaagagctt 510

<210> 4

PCT56013_SeqList_ApplNo._notyetassigned.txt

<211> 170
<212> PRT
<213> mouse

<220>
<223> mature MZB1 amino acid sequence

<400> 4

Ser Ala Gly Asp Arg Val Ser Leu Ser Ala Ser Ala Pro Thr Leu Asp
1 5 10 15

Asp Glu Glu Lys Tyr Ser Ala His Met Pro Ala His Leu Arg Cys Asp
20 25 30

Ala Cys Arg Ala Val Ala Phe Gln Met Gly Gln Arg Leu Ala Lys Ala
35 40 45

Glu Ala Lys Ser His Thr Pro Asp Ala Ser Gly Leu Gln Glu Leu Ser
50 55 60

Glu Ser Thr Tyr Thr Asp Val Leu Asp Gln Thr Cys Ser Gln Asn Trp
65 70 75 80

Gln Ser Tyr Gly Val His Glu Val Asn Gln Met Lys Arg Leu Thr Gly
85 90 95

Pro Gly Leu Ser Lys Gly Pro Glu Pro Arg Ile Ser Val Met Ile Ser
100 105 110

Gly Gly Pro Trp Pro Asn Arg Leu Ser Lys Thr Cys Phe His Tyr Leu
115 120 125

Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala Tyr Arg Gln Gly Gln
130 135 140

Ala Asn Leu Glu Ala Leu Leu Cys Gly Gly Thr His Gly Pro Cys Ser
145 150 155 160

Gln Glu Ile Leu Ala Gln Arg Glu Glu Leu
165 170

<210> 5
<211> 552
<212> DNA
<213> mouse

<220>
<223> full length MZB1 without C-terminal REEL coding sequence

<400> 5

atgagactgc ctctgccact gttgctactg ttcgggtgca gggctatcct ggggagcgcc	60
ggggataggg tttccctctc ggcttcggct cccacactgg atgatgaaga gaagtactcg	120
gctcatatgc cggctcacct gcgctcgat gcctgccggg ctgtggcctt ccagatgggg	180

PCT56013_SeqList_App1No._notyetassigned.txt

caacgtctgg cgaaagcaga ggctaaatct cacactccag acgccagtgg attgcaggag	240
ctgagtgaat ccacgtacac agatgtcctg gaccagacct gctctcagaa ctggcagtcc	300
tatggagttc atgaagtga ccagatgaag cgtctcacgg gccaggact tagcaagggg	360
ccagagccaa gaatcagcgt gatgatttct ggggggtcct ggccaatag gctctccaag	420
acgtgtttcc actacctggg tgagtttgga gaggaccaga tctatgaagc ctaccgccaa	480
ggccaagcga atctggaggg gctgctctgt gggggcaccc atggggccctg ctcacaggag	540
atcctggccc ag	552

<210> 6
 <211> 184
 <212> PRT
 <213> mouse

<220>
 <223> full length MZB1 without C-terminal REEL amino acid sequence
 <400> 6

Met Arg Leu Pro Leu Pro Leu Leu Leu Leu Phe Gly Cys Arg Ala Ile
 1 5 10 15

Leu Gly Ser Ala Gly Asp Arg Val Ser Leu Ser Ala Ser Ala Pro Thr
 20 25 30

Leu Asp Asp Glu Glu Lys Tyr Ser Ala His Met Pro Ala His Leu Arg
 35 40 45

Cys Asp Ala Cys Arg Ala Val Ala Phe Gln Met Gly Gln Arg Leu Ala
 50 55 60

Lys Ala Glu Ala Lys Ser His Thr Pro Asp Ala Ser Gly Leu Gln Glu
 65 70 75 80

Leu Ser Glu Ser Thr Tyr Thr Asp Val Leu Asp Gln Thr Cys Ser Gln
 85 90 95

Asn Trp Gln Ser Tyr Gly Val His Glu Val Asn Gln Met Lys Arg Leu
 100 105 110

Thr Gly Pro Gly Leu Ser Lys Gly Pro Glu Pro Arg Ile Ser Val Met
 115 120 125

Ile Ser Gly Gly Pro Trp Pro Asn Arg Leu Ser Lys Thr Cys Phe His
 130 135 140

Tyr Leu Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala Tyr Arg Gln
 145 150 155 160

Gly Gln Ala Asn Leu Glu Ala Leu Leu Cys Gly Gly Thr His Gly Pro
 165 170 175

PCT56013_SeqList_App1No._notyetassigned.txt

Cys Ser Gln Glu Ile Leu Ala Gln
180

<210> 7
<211> 498
<212> DNA
<213> mouse

<220>
<223> mature MZB1 without C-terminal REEL coding sequence

<400> 7
agcgccgggg ataggggttc cctctcggct tcggctccca cactggatga tgaagagaag 60
tactcggctc atatgccggc tcacctgcgc tgcgatgcct gccgggctgt ggccttccag 120
atggggcaac gtctggcgaa agcagaggct aaatctcaca ctccagacgc cagtggattg 180
caggagctga gtgaatccac gtacacagat gtcctggacc agacctgctc tcagaactgg 240
cagtcctatg gagttcatga agtgaaccag atgaagcgtc tcacgggccc aggacttagc 300
aaggggccag agccaagaat cagcgtgatg atttctgggg gtccctggcc caataggctc 360
tccaagacgt gtttccacta cctgggtgag tttggagagg accagatcta tgaagcctac 420
cgccaaggcc aagcgaatct ggaggcgtg ctctgtgggg gcacccatgg gccctgctca 480
caggagatcc tggcccag 498

<210> 8
<211> 166
<212> PRT
<213> mouse

<220>
<223> mature MZB1 without C-terminal REEL amino acid sequence

<400> 8
Ser Ala Gly Asp Arg Val Ser Leu Ser Ala Ser Ala Pro Thr Leu Asp
1 5 10 15
Asp Glu Glu Lys Tyr Ser Ala His Met Pro Ala His Leu Arg Cys Asp
20 25 30
Ala Cys Arg Ala Val Ala Phe Gln Met Gly Gln Arg Leu Ala Lys Ala
35 40 45
Glu Ala Lys Ser His Thr Pro Asp Ala Ser Gly Leu Gln Glu Leu Ser
50 55 60
Glu Ser Thr Tyr Thr Asp Val Leu Asp Gln Thr Cys Ser Gln Asn Trp
65 70 75 80
Gln Ser Tyr Gly Val His Glu Val Asn Gln Met Lys Arg Leu Thr Gly
85 90 95
Pro Gly Leu Ser Lys Gly Pro Glu Pro Arg Ile Ser Val Met Ile Ser
Seite 5

Gly Gly Pro Trp Pro Asn Arg Leu Ser Lys Thr Cys Phe His Tyr Leu
115 120 125

Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala Tyr Arg Gln Gly Gln
130 135 140

Ala Asn Leu Glu Ala Leu Leu Cys Gly Gly Thr His Gly Pro Cys Ser
145 150 155 160

Gln Glu Ile Leu Ala Gln
165

<210> 9
<211> 402
<212> DNA
<213> mouse

<220>
<223> amino acids 46-179 of MZB1 coding sequence

<400> 9
cacctgcgct gcgatgcctg ccgggctgtg gccttccaga tggggcaacg tctggcgaaa 60
gcagaggcta aatctcacac tccagacgcc agtggattgc aggagctgag tgaatccacg 120
tacacagatg tcttgacca gacctgctct cagaactggc agtcctatgg agttcatgaa 180
gtgaaccaga tgaagcgtct cacgggcccc ggacttagca aggggccaga gccaagaatc 240
agcgtgatga tttctggggg tccctggccc aataggctct ccaagacgtg tttccactac 300
ctgggtgagt ttggagagga ccagatctat gaagcctacc gccaaggcca agcgaatctg 360
gaggcgctgc tctgtggggg cacccatggg ccctgctcac ag 402

<210> 10
<211> 134
<212> PRT
<213> mouse

<220>
<223> amino acids 46-179 of MZB1 amino acid sequence

<400> 10

His Leu Arg Cys Asp Ala Cys Arg Ala Val Ala Phe Gln Met Gly Gln
1 5 10 15

Arg Leu Ala Lys Ala Glu Ala Lys Ser His Thr Pro Asp Ala Ser Gly
20 25 30

Leu Gln Glu Leu Ser Glu Ser Thr Tyr Thr Asp Val Leu Asp Gln Thr
35 40 45

Cys Ser Gln Asn Trp Gln Ser Tyr Gly Val His Glu Val Asn Gln Met
50 55 60

PCT56013_SeqList_App1No._notyetassigned.txt

Lys Arg Leu Thr Gly Pro Gly Leu Ser Lys Gly Pro Glu Pro Arg Ile
65 70 75 80

Ser Val Met Ile Ser Gly Gly Pro Trp Pro Asn Arg Leu Ser Lys Thr
85 90 95

Cys Phe His Tyr Leu Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala
100 105 110

Tyr Arg Gln Gly Gln Ala Asn Leu Glu Ala Leu Leu Cys Gly Gly Thr
115 120 125

His Gly Pro Cys Ser Gln
130

<210> 11
<211> 884
<212> DNA
<213> mouse

<220>
<223> full length MZB1 coding sequence with 5' and 3' UTR

<400> 11
ccaagaagta agttcagagg ccatgagact gcctctgcca ctgttgctac tggtcgggtg 60
cagggctatc ctggggagcg ccggggatag ggtttcctc tcggcttcgg ctcccacact 120
ggatgatgaa gagaagtact cggctcatat gccggctcac ctgcgctgcg atgcctgccg 180
ggctgtggcc ttccagatgg ggcaacgtct ggcgaaagca gaggctaaat ctcacactcc 240
agacgccagt ggattgcagg agctgagtga atccacgtac acagatgtcc tggaccagac 300
ctgctctcag aactggcagt cctatggagt tcatgaagtg aaccagatga agcgtctcac 360
gggcccagga cttagcaagg ggccagagcc aagaatcagc gtgatgattt ctgggggtcc 420
ctggcccaat aggcctctcca agacgtgttt ccactacctg ggtgagtttg gagaggacca 480
gatctatgaa gcctaccgcc aaggccaagc gaatctggag gcgctgctct gtgggggacac 540
ccatgggccc tgctcacagg agatcctggc ccagagagaa gagctttagt ccaacctgct 600
gcacttctgg atcttctcta attttattat tattaatggc tgattagagg caggctctca 660
tcatgtaggc caggctggct taaacttgct atcctgctca gcctcgaaag tgctgcattt 720
aagtcctgag cttttttgtg cttgaccctc ctatataatt ttttcaactg tggtggtggg 780
gaggggacag ggaagcctga ctctagctgt caatcttctc cctccacctc tcgatggggt 840
actgggactg aggcctgcctt tctactttca aataaagctt tgaa 884

<210> 12
<211> 586
<212> DNA
<213> mouse

<220>
<223> full length MZB1 coding sequence with 5' UTR

PCT56013_SeqList_App1No._notyetassigned.txt

<400> 12
ccaagaagta agttcagagg ccatgagact gcctctgcc a ctgttgctac tgttcgggtg 60
cagggctatc ctggggagcg ccggggatag ggtttccctc tcggcttcgg ctcccacact 120
ggatgatgaa gagaagtact cggctcatat gccggctcac ctgcgctgcg atgcctgccg 180
ggctgtggcc ttccagatgg ggcaacgtct ggcgaaagca gaggctaaat ctcacactcc 240
agacgccagt ggattgcagg agctgagtga atccacgtac acagatgtcc tggaccagac 300
ctgctctcag aactggcagt cctatggagt tcatgaagtg aaccagatga agcgtctcac 360
ggccccagga cttagcaagg ggccagagcc aagaatcagc gtgatgattt ctgggggtcc 420
ctggcccaat aggctctcca agacgtgttt ccactacctg ggtgagtttg gagaggacca 480
gatctatgaa gcctaccgcc aaggccaagc gaatctggag gcgctgctct gtggggggcac 540
ccatgggccc tgctcacagg agatcctggc ccagagagaa gagctt 586

<210> 13
<211> 862
<212> DNA
<213> mouse

<220>
<223> full length MZB1 coding sequence with 3' UTR

<400> 13
atgagactgc ctctgccact gttgctactg ttcgggtgca gggctatcct ggggagcgcc 60
ggggataggg tttccctctc ggcttcggct cccacactgg atgatgaaga gaagtactcg 120
gctcatatgc cggctcacct gcgctgcgat gcctgccggg ctgtggcctt ccagatgggg 180
caacgtctgg cgaaagcaga ggctaaatct cactctccag acgccagtgg attgcaggag 240
ctgagtgaat ccacgtacac agatgtcctg gaccagacct gctctcagaa ctggcagtcc 300
tatggagttc atgaagtga ccagatgaag cgtctcacgg gccaggact tagcaagggg 360
ccagagccaa gaatcagcgt gatgatttct ggggggtccct ggcccaatag gctctccaag 420
acgtgtttcc actacctggg tgagtttgga gaggaccaga tctatgaagc ctaccgcca 480
ggccaagcga atctggaggc gctgctctgt gggggcacc atgggccctg ctcacaggag 540
atcctggccc agagagaaga gcttttagtcc aacctgctgc acttctggat cttctcta 600
tttattatta ttaatggctg attagaggca ggctctcatc atgtaggcca ggctggctta 660
aacttgatc cctgctcagc ctcgaaagt ctgcatttaa gtcctgagcc tttttgtgct 720
tgaccctcct atataatttt ttcaactgtg gtgggtggga ggggacagg aagcctgact 780
ctagctgtca atcttctccc tccacctctc gatgggggtac tgggactgag gctgcctttc 840
tactttcaaa taaagctttg aa 862

<210> 14
<211> 19
<212> DNA
<213> mouse

<220>
 <223> RNAi target sequence
 <400> 14
 gcgaaagcag aggctaaat 19

<210> 15
 <211> 19
 <212> DNA
 <213> mouse

<220>
 <223> RNAi target sequence
 <400> 15
 gcagtcctat ggagtccat 19

<210> 16
 <211> 19
 <212> DNA
 <213> mouse

<220>
 <223> RNAi target sequence
 <400> 16
 ccagatctat gaagcctac 19

<210> 17
 <211> 19
 <212> DNA
 <213> mouse

<220>
 <223> RNAi target sequence
 <400> 17
 ctgccactgt tgctactgt 19

<210> 18
 <211> 47
 <212> RNA
 <213> mouse

<220>
 <223> MZB1 specific shRNA
 <400> 18
 gcgaaagcag aggcuaaaau ucaagagaau uuagccucug cuuucgc 47

<210> 19
 <211> 47
 <212> RNA
 <213> mouse

<220>
 <223> MZB1 specific shRNA
 <400> 19
 gcaguccuau ggaguucauu ucaagagaau gaacuccaua ggacugc 47

<210> 20

PCT56013_SeqList_ApplNo._notyetassigned.txt

<211> 46
<212> RNA
<213> mouse

<220>
<223> MZB1 specific shRNA

<400> 20
ccagaucuau gaagccuacu caagagagua ggcuucauag aucugg 46

<210> 21
<211> 47
<212> RNA
<213> mouse

<220>
<223> MZB1 specific shRNA

<400> 21
cugccacugu ugcucuguu ucaagagaac aguagcaaca guggcag 47