SEQUENCE LISTING

<110> Sphingotec Therapeutics GmbH

<120> DPP3 binder directed to and binding to specific DPP3-epitopes and its use in the prevention and treatment of diseases / acute conditions that are associated with oxidative stress

<130> S75179WO

<150> EP17198420.6
<151> 2017-10-25

<160> 13

<170> PatentIn version 3.5

<210> 1
<211> 737
<212> PRT
<213> Homo sapiens

<400> 1

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Met Ala Asp Thr Gln Tyr Ile Leu Pro Asn Asp Ile Gly Val Ser Ser
1               5                  10                  15


Leu Asp Cys Arg Glu Ala Phe Arg Leu Leu Ser Pro Thr Glu Arg Leu
            20                  25                  30


Tyr Ala Tyr His Leu Ser Arg Ala Ala Trp Tyr Gly Gly Leu Ala Val
        35                  40                  45


Leu Leu Gln Thr Ser Pro Glu Ala Pro Tyr Ile Tyr Ala Leu Leu Ser
    50                  55                  60


Arg Leu Phe Arg Ala Gln Asp Pro Asp Gln Leu Arg Gln His Ala Leu
65                  70                  75                  80


Ala Glu Gly Leu Thr Glu Glu Glu Tyr Gln Ala Phe Leu Val Tyr Ala
                85                  90                  95
```

```
Ala Gly Val Tyr Ser Asn Met Gly Asn Tyr Lys Ser Phe Gly Asp Thr
            100                 105                 110

Lys Phe Val Pro Asn Leu Pro Lys Glu Lys Leu Glu Arg Val Ile Leu
        115                 120                 125

Gly Ser Glu Ala Ala Gln Gln His Pro Glu Glu Val Arg Gly Leu Trp
    130                 135                 140

Gln Thr Cys Gly Glu Leu Met Phe Ser Leu Glu Pro Arg Leu Arg His
145                 150                 155                 160

Leu Gly Leu Gly Lys Glu Gly Ile Thr Thr Tyr Phe Ser Gly Asn Cys
                165                 170                 175

Thr Met Glu Asp Ala Lys Leu Ala Gln Asp Phe Leu Asp Ser Gln Asn
            180                 185                 190

Leu Ser Ala Tyr Asn Thr Arg Leu Phe Lys Glu Val Asp Gly Glu Gly
        195                 200                 205

Lys Pro Tyr Tyr Glu Val Arg Leu Ala Ser Val Leu Gly Ser Glu Pro
    210                 215                 220

Ser Leu Asp Ser Glu Val Thr Ser Lys Leu Lys Ser Tyr Glu Phe Arg
225                 230                 235                 240

Gly Ser Pro Phe Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln
                245                 250                 255

Lys Val Val Glu Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser
            260                 265                 270

His Gln Gly Gln Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly
        275                 280                 285
```

```
Ser Ile Glu Ala His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys
    290                 295                 300

Gly Pro Ile Val Glu Ser Tyr Ile Gly Phe Ile Glu Ser Tyr Arg Asp
305                 310                 315                 320

Pro Phe Gly Ser Arg Gly Glu Phe Glu Gly Phe Val Ala Val Val Asn
                325                 330                 335

Lys Ala Met Ser Ala Lys Phe Glu Arg Leu Val Ala Ser Ala Glu Gln
            340                 345                 350

Leu Leu Lys Glu Leu Pro Trp Pro Pro Thr Phe Glu Lys Asp Lys Phe
        355                 360                 365

Leu Thr Pro Asp Phe Thr Ser Leu Asp Val Leu Thr Phe Ala Gly Ser
    370                 375                 380

Gly Ile Pro Ala Gly Ile Asn Ile Pro Asn Tyr Asp Asp Leu Arg Gln
385                 390                 395                 400

Thr Glu Gly Phe Lys Asn Val Ser Leu Gly Asn Val Leu Ala Val Ala
                405                 410                 415

Tyr Ala Thr Gln Arg Glu Lys Leu Thr Phe Leu Glu Glu Asp Asp Lys
            420                 425                 430

Asp Leu Tyr Ile Leu Trp Lys Gly Pro Ser Phe Asp Val Gln Val Gly
        435                 440                 445

Leu His Glu Leu Leu Gly His Gly Ser Gly Lys Leu Phe Val Gln Asp
    450                 455                 460

Glu Lys Gly Ala Phe Asn Phe Asp Gln Glu Thr Val Ile Asn Pro Glu
465                 470                 475                 480
```

```
Thr Gly Glu Gln Ile Gln Ser Trp Tyr Arg Ser Gly Glu Thr Trp Asp
                485                 490                 495

Ser Lys Phe Ser Thr Ile Ala Ser Ser Tyr Glu Glu Cys Arg Ala Glu
            500                 505                 510

Ser Val Gly Leu Tyr Leu Cys Leu His Pro Gln Val Leu Glu Ile Phe
        515                 520                 525

Gly Phe Glu Gly Ala Asp Ala Glu Asp Val Ile Tyr Val Asn Trp Leu
    530                 535                 540

Asn Met Val Arg Ala Gly Leu Leu Ala Leu Glu Phe Tyr Thr Pro Glu
545                 550                 555                 560

Ala Phe Asn Trp Arg Gln Ala His Met Gln Ala Arg Phe Val Ile Leu
                565                 570                 575

Arg Val Leu Leu Glu Ala Gly Glu Gly Leu Val Thr Ile Thr Pro Thr
            580                 585                 590

Thr Gly Ser Asp Gly Arg Pro Asp Ala Arg Val Arg Leu Asp Arg Ser
        595                 600                 605

Lys Ile Arg Ser Val Gly Lys Pro Ala Leu Glu Arg Phe Leu Arg Arg
    610                 615                 620

Leu Gln Val Leu Lys Ser Thr Gly Asp Val Ala Gly Gly Arg Ala Leu
625                 630                 635                 640

Tyr Glu Gly Tyr Ala Thr Val Thr Asp Ala Pro Pro Glu Cys Phe Leu
                645                 650                 655

Thr Leu Arg Asp Thr Val Leu Leu Arg Lys Glu Ser Arg Lys Leu Ile
            660                 665                 670
```

```
Val Gln Pro Asn Thr Arg Leu Glu Gly Ser Asp Val Gln Leu Leu Glu
        675                 680                 685


Tyr Glu Ala Ser Ala Ala Gly Leu Ile Arg Ser Phe Ser Glu Arg Phe
    690                 695                 700


Pro Glu Asp Gly Pro Glu Leu Glu Glu Ile Leu Thr Gln Leu Ala Thr
705                 710                 715                 720


Ala Asp Ala Arg Phe Trp Lys Gly Pro Ser Glu Ala Pro Ser Gly Gln
                725                 730                 735


Ala
```

<210> 2
<211> 21
<212> PRT
<213> Homo sapiens

<400> 2

```
Cys Glu Thr Val Ile Asn Pro Glu Thr Gly Glu Gln Ile Gln Ser Trp
1               5                   10                  15


Tyr Arg Ser Gly Glu
            20
```

<210> 3
<211> 6
<212> PRT
<213> Homo sapiens

<400> 3

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Ile Asn Pro Glu Thr Gly
1               5
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<210> 4
<211> 4

<212> PRT
<213> Homo sapiens

<400> 4

Glu Thr Gly Glu
1

<210> 5
<211> 116
<212> PRT
<213> Mus musculus

<400> 5

Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Gln Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Met Ser Val Gly Trp Ile Arg Gln Pro Ser Gly Lys Gly Leu Glu
35 40 45

Trp Leu Ala His Ile Trp Trp Asn Asp Asn Lys Ser Tyr Asn Pro Ala
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Arg Asp Thr Ser Asn Asn Gln Val
65 70 75 80

Phe Leu Lys Ile Ala Ser Val Val Thr Ala Asp Thr Gly Thr Tyr Phe
85 90 95

Cys Ala Arg Asn Tyr Ser Tyr Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 6
<211> 112
<212> PRT
<213> Mus musculus

<400> 6

```
Asp Val Val Val Thr Gln Thr Pro Leu Ser Leu Ser Val Ser Leu Gly
1               5                   10                  15


Asp Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Val His Ser
            20                  25                  30


Ile Gly Ser Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45


Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
    50                  55                  60


Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80


Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
                85                  90                  95


Thr His Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 7
<211> 10
<212> PRT
<213> Mus musculus

<400> 7

```
Gly Phe Ser Leu Ser Thr Ser Gly Met Ser
1               5                   10
```

<210> 8
<211> 7

<212> PRT
<213> Mus musculus

<400> 8

Ile Trp Trp Asn Asp Asn Lys
1 5

<210> 9
<211> 8
<212> PRT
<213> Mus musculus

<400> 9

Ala Arg Asn Tyr Ser Tyr Asp Tyr
1 5

<210> 10
<211> 11
<212> PRT
<213> Mus musculus

<400> 10

Arg Ser Leu Val His Ser Ile Gly Ser Thr Tyr
1 5 10

<210> 11
<211> 9
<212> PRT
<213> Mus musculus

<400> 11

Ser Gln Ser Thr His Val Pro Trp Thr
1 5

<210> 12
<211> 469
<212> PRT
<213> Mus musculus

<400> 12

```
Met Asp Pro Lys Gly Ser Leu Ser Trp Arg Ile Leu Leu Phe Leu Ser
1               5                   10                  15

Leu Ala Phe Glu Leu Ser Tyr Gly Gln Ile Thr Leu Lys Glu Ser Gly
            20                  25                  30

Pro Thr Leu Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe
        35                  40                  45

Ser Gly Phe Ser Leu Ser Thr Ser Gly Met Ser Val Gly Trp Ile Arg
    50                  55                  60

Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala His Ile Trp Trp Asn
65                  70                  75                  80

Asp Asn Lys Ser Tyr Asn Pro Ala Leu Lys Ser Arg Leu Thr Ile Thr
                85                  90                  95

Arg Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp
            100                 105                 110

Pro Val Asp Thr Gly Thr Tyr Tyr Cys Ala Arg Asn Tyr Ser Tyr Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
    130                 135                 140

Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
145                 150                 155                 160

Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
                165                 170                 175

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
            180                 185                 190
```

```
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
        195                 200                 205


Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
    210                 215                 220


Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
225                 230                 235                 240


Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
                245                 250                 255


Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
            260                 265                 270


Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
        275                 280                 285


Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
    290                 295                 300


Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
305                 310                 315                 320


Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
                325                 330                 335


Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
            340                 345                 350


Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
        355                 360                 365


Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
    370                 375                 380
```

```
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
385                 390                 395                 400


Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
                405                 410                 415


Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
            420                 425                 430


Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
        435                 440                 445


Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
    450                 455                 460


Ser Leu Ser Pro Gly
465


<210>  13
<211>  239
<212>  PRT
<213>  Mus musculus

<400>  13

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                   10                  15


Gly Ser Thr Gly Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser
            20                  25                  30


Val Thr Pro Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Arg Ser
        35                  40                  45


Leu Val His Ser Ile Gly Ser Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys
    50                  55                  60
```

```
Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe
65                  70                  75                  80


Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
                85                  90                  95


Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
            100                 105                 110


Cys Ser Gln Ser Thr His Val Pro Trp Thr Phe Gly Gly Gly Thr Lys
        115                 120                 125


Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
    130                 135                 140


Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
145                 150                 155                 160


Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
                165                 170                 175


Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
            180                 185                 190


Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
        195                 200                 205


Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
    210                 215                 220


Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225                 230                 235
```