

SEQUENCE LISTING

<110> DSM Fine Chemicals Austria Nfg GmbH & Co KG

<120> Novel polypeptide having esterase activity and recombinant esterase and use thereof

<130> O.Z.1302a

<160> 9

<170> PatentIn version 3.3

<210> 1

<211> 548

<212> PRT

<213> Artificial

<220>

<223> rAPLE

<400> 1

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

Leu Gly Lys Tyr Val Ser Leu Glu Gly Leu Ala Gln Pro Val Ala Val
20 25 30

Phe Leu Gly Val Pro Phe Ala Lys Pro Pro Leu Gly Ser Leu Arg Phe
35 40 45

Ala Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn Thr Thr
50 55 60

Ser Tyr Pro Pro Met Cys Cys Gln Glu Pro Ile Gly Gly Gln Met Leu
65 70 75 80

Ser Asp Leu Phe Thr Asn Arg Lys Glu Arg Leu Ile Pro Glu Phe Ser
85 90 95

Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr Lys
100 105 110

Arg Gly Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu Val
115 120 125

Val Gly Gly Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala His Glu
130 135 140

Asn Val Val Val Val Ala Ile Gln Tyr Arg Leu Gly Ile Trp Gly Phe
145 150 155 160

Leu Met Gly Asp Val Val Phe Gly Val Pro Ser Val Thr Val Ala Arg
 405 410 415

Gln His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr Glu Phe Gln Tyr
 420 425 430

Arg Pro Ser Phe Ser Ser Asp Lys Lys Pro Lys Thr Val Ile Gly Asp
 435 440 445

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

Asp Ala Pro Glu Glu Glu Val Ser Leu Ser Lys Thr Val Met Lys Phe
 465 470 475 480

Trp Ala Asn Phe Ala Arg Ser Gly Asn Pro Asn Gly Glu Gly Leu Pro
 485 490 495

His Trp Pro Met Tyr Asp Gln Glu Glu Gly Tyr Leu Gln Ile Gly Val
 500 505 510

Asn Thr Gln Ala Ala Lys Arg Leu Lys Gly Glu Glu Val Ala Phe Trp
 515 520 525

Asn Asp Leu Leu Ser Lys Glu Ala Ala Lys Lys Pro Pro Lys Ile Lys
 530 535 540

His Ala Glu Leu
 545

<210> 2
 <211> 1647
 <212> DNA
 <213> Artificial

<220>
 <223> rAPLE

<400> 2
 gggcagccag cctcgccgcc tggtgtggac actgccaggg gccgagtcct ggggaagtac 60
 gtcagcttag aaggcctggc acagccgggt gccgtcttcc tgggagtcct ttttgccaag 120
 cccctctctg gatccttgag gtttgctccg ccgcagcctg cagaaccatg gagcttcgtg 180
 aagaacacca cctcctaccc tcccatgtgc tgccaagagc caattggggg acagatgctc 240
 tcagatctat ttaccaacag aaaggagagg ctcatccgg agttttctga agactgtctc 300
 tacctaaata ttacacccc tgctgacctg acaaagaggg gcagactgcc ggtgatggtg 360

```

tggatccacg gaggaggtct ggtggtgggc ggggcttcca cctatgatgg actggccctc 420
gctgcgcatg aaaacgtggt ggtggtggcc atccagtacc gcctgggcat ctggggattc 480
ttcagcacag gggacgaaca cagccggggc aactggggtc acttggaaca ggtggccgca 540
ctgcactggg tccaggagaa catcgccaac tttggaggcg acccaggctc tgtgaccatc 600
tttggagagt cagcaggagg ggaaagtgtc tctgttctgg tggtgtctcc cttggccaag 660
aacctcttcc accgggccat ctctgagagt ggcgtggcct tcaactgettg cctggtcagg 720
aaggacatga aggctgcagc taagcaaatt gctgtccttg ctgggtgtaa aaccaccacc 780
tcggctgtct ttgttcactg cctgcgccag aagtcggagg acgagctctt ggacttaacg 840
ctgaagatga aatTTTTTgc tcttgatttg catggagacc ccagagagag ccatcccttc 900
ctgaccactg tgggtgatgg agtgctgtcg cccaagatgc ctgaagagat tctggctgaa 960
aaggatttca aactgtccc ctacatcgtg ggaatcaaca agcaagagtt tggctggctt 1020
ctgccaaacga tgatgggctt cccctctct gaaggcaagc tggaccagaa gacggccacg 1080
tcaactctgt ggaagtecta ccccatcgct aacatccctg aggaactgac tccagtggcc 1140
actgacaagt atttgggggg gacagacgac cccgtcaaaa agaaagacct gttcctggac 1200
ttgatggggg atgtggtgtt tgggtgtcca tctgtgacgg tggcccgta acacagagat 1260
gcaggagccc ccacctacat gtatgagttt cagtatcgcc caagcttctc atcggacaag 1320
aaaccaaga cggatgatcg ggaccacggg gatgagatct tctccgtctt tggttttcca 1380
ctgttaaaag gcgatgcccc agaagaggag gtcagtctca gcaagacggt gatgaaattc 1440
tgggccaact ttgctcgag tgggaacccc aatggggagg ggctgcccc ttggccgatg 1500
tacgaccagg aagaagggtc ccttcagatc ggcgtcaaca ccagggcagc caagaggctg 1560
aaaggtgaag aagtggcctt ctggaacgat ctctgtcca aggaggcagc aaagaagcca 1620
cccaagataa agcatgctga gctgtga 1647

```

```

<210> 3
<211> 33
<212> DNA
<213> Artificial

```

```

<220>
<223> primer

```

```

<400> 3
cagaattcat ggctatcggg cagccagcct cgc 33

```

```

<210> 4
<211> 30
<212> DNA

```

<213> Artificial

<220>

<223> primer

<400> 4

ccggaattca gcctcccctt cacagctcag

30

<210> 5

<211> 43

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 5

tcttcgaaga attcacgatg agatttcctt caatttttac tgc

43

<210> 6

<211> 36

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 6

gaggctggct gccagcttc agcctctctt ttctcg

36

<210> 7

<211> 33

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 7

agagaggctg aagctgggca gccagcctcg ccg

33

<210> 8

<211> 39

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 8

atggtaccga attctcacag ctcagcatgc tttatcttg

39

<210> 9

<211> 40

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 9

atggtaccga attctcactt tatcttgggt ggcttctttg

40