

10109W001_SEQ_ST25.txt
SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> COMPOSITIONS AND METHODS FOR INTERNALIZING ENZYMES

<130> 10109W001

<150> US 62/264,702

<151> 2015-12-08

<150> US 62/379,929

<151> 2016-08-25

<160> 1

<170> PatentIn version 3.5

<210> 1

<211> 883

<212> PRT

<213> Homo sapiens

<400> 1

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

Pro Asn Ser Arg Phe Asp Cys Ala Pro Asp Lys Ala Ile Thr Gln Glu
20 25 30

Gln Cys Glu Ala Arg Gly Cys Cys Tyr Ile Pro Ala Lys Gln Gly Leu
35 40 45

Gln Gly Ala Gln Met Gly Gln Pro Trp Cys Phe Phe Pro Pro Ser Tyr
50 55 60

Pro Ser Tyr Lys Leu Glu Asn Leu Ser Ser Ser Glu Met Gly Tyr Thr
65 70 75 80

Ala Thr Leu Thr Arg Thr Thr Pro Thr Phe Phe Pro Lys Asp Ile Leu
85 90 95

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Thr Leu Arg Leu Asp Val Met Met Glu Thr Glu Asn Arg Leu His Phe
100 105 110

Thr Ile Lys Asp Pro Ala Asn Arg Arg Tyr Glu Val Pro Leu Glu Thr
115 120 125

Pro His Val His Ser Arg Ala Pro Ser Pro Leu Tyr Ser Val Glu Phe
130 135 140

Ser Glu Glu Pro Phe Gly Val Ile Val Arg Arg Gln Leu Asp Gly Arg
145 150 155 160

Val Leu Leu Asn Thr Thr Val Ala Pro Leu Phe Phe Ala Asp Gln Phe
165 170 175

Leu Gln Leu Ser Thr Ser Leu Pro Ser Gln Tyr Ile Thr Gly Leu Ala
180 185 190

Glu His Leu Ser Pro Leu Met Leu Ser Thr Ser Trp Thr Arg Ile Thr
195 200 205

Leu Trp Asn Arg Asp Leu Ala Pro Thr Pro Gly Ala Asn Leu Tyr Gly
210 215 220

Ser His Pro Phe Tyr Leu Ala Leu Glu Asp Gly Gly Ser Ala His Gly
225 230 235 240

Val Phe Leu Leu Asn Ser Asn Ala Met Asp Val Val Leu Gln Pro Ser
245 250 255

Pro Ala Leu Ser Trp Arg Ser Thr Gly Gly Ile Leu Asp Val Tyr Ile
260 265 270

Phe Leu Gly Pro Glu Pro Lys Ser Val Val Gln Gln Tyr Leu Asp Val
275 280 285

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Val Gly Tyr Pro Phe Met Pro Pro Tyr Trp Gly Leu Gly Phe His Leu
290 295 300

Cys Arg Trp Gly Tyr Ser Ser Thr Ala Ile Thr Arg Gln Val Val Glu
305 310 315 320

Asn Met Thr Arg Ala His Phe Pro Leu Asp Val Gln Trp Asn Asp Leu
325 330 335

Asp Tyr Met Asp Ser Arg Arg Asp Phe Thr Phe Asn Lys Asp Gly Phe
340 345 350

Arg Asp Phe Pro Ala Met Val Gln Glu Leu His Gln Gly Gly Arg Arg
355 360 365

Tyr Met Met Ile Val Asp Pro Ala Ile Ser Ser Ser Gly Pro Ala Gly
370 375 380

Ser Tyr Arg Pro Tyr Asp Glu Gly Leu Arg Arg Gly Val Phe Ile Thr
385 390 395 400

Asn Glu Thr Gly Gln Pro Leu Ile Gly Lys Val Trp Pro Gly Ser Thr
405 410 415

Ala Phe Pro Asp Phe Thr Asn Pro Thr Ala Leu Ala Trp Trp Glu Asp
420 425 430

Met Val Ala Glu Phe His Asp Gln Val Pro Phe Asp Gly Met Trp Ile
435 440 445

Asp Met Asn Glu Pro Ser Asn Phe Ile Arg Gly Ser Glu Asp Gly Cys
450 455 460

Pro Asn Asn Glu Leu Glu Asn Pro Pro Tyr Val Pro Gly Val Val Gly
465 470 475 480

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Gly Thr Leu Gln Ala Ala Thr Ile Cys Ala Ser Ser His Gln Phe Leu
485 490 495

Ser Thr His Tyr Asn Leu His Asn Leu Tyr Gly Leu Thr Glu Ala Ile
500 505 510

Ala Ser His Arg Ala Leu Val Lys Ala Arg Gly Thr Arg Pro Phe Val
515 520 525

Ile Ser Arg Ser Thr Phe Ala Gly His Gly Arg Tyr Ala Gly His Trp
530 535 540

Thr Gly Asp Val Trp Ser Ser Trp Glu Gln Leu Ala Ser Ser Val Pro
545 550 555 560

Glu Ile Leu Gln Phe Asn Leu Leu Gly Val Pro Leu Val Gly Ala Asp
565 570 575

Val Cys Gly Phe Leu Gly Asn Thr Ser Glu Glu Leu Cys Val Arg Trp
580 585 590

Thr Gln Leu Gly Ala Phe Tyr Pro Phe Met Arg Asn His Asn Ser Leu
595 600 605

Leu Ser Leu Pro Gln Glu Pro Tyr Ser Phe Ser Glu Pro Ala Gln Gln
610 615 620

Ala Met Arg Lys Ala Leu Thr Leu Arg Tyr Ala Leu Leu Pro His Leu
625 630 635 640

Tyr Thr Leu Phe His Gln Ala His Val Ala Gly Glu Thr Val Ala Arg
645 650 655

Pro Leu Phe Leu Glu Phe Pro Lys Asp Ser Ser Thr Trp Thr Val Asp
660 665 670

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His Gln Leu Leu Trp Gly Glu Ala Leu Leu Ile Thr Pro Val Leu Gln
675 680 685

Ala Gly Lys Ala Glu Val Thr Gly Tyr Phe Pro Leu Gly Thr Trp Tyr
690 695 700

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

Pro Ala Ala Pro Arg Glu Pro Ala Ile His Ser Glu Gly Gln Trp Val
725 730 735

Thr Leu Pro Ala Pro Leu Asp Thr Ile Asn Val His Leu Arg Ala Gly
740 745 750

Tyr Ile Ile Pro Leu Gln Gly Pro Gly Leu Thr Thr Thr Glu Ser Arg
755 760 765

Gln Gln Pro Met Ala Leu Ala Val Ala Leu Thr Lys Gly Gly Glu Ala
770 775 780

Arg Gly Glu Leu Phe Trp Asp Asp Gly Glu Ser Leu Glu Val Leu Glu
785 790 795 800

Arg Gly Ala Tyr Thr Gln Val Ile Phe Leu Ala Arg Asn Asn Thr Ile
805 810 815

Val Asn Glu Leu Val Arg Val Thr Ser Glu Gly Ala Gly Leu Gln Leu
820 825 830

Gln Lys Val Thr Val Leu Gly Val Ala Thr Ala Pro Gln Gln Val Leu
835 840 845

Ser Asn Gly Val Pro Val Ser Asn Phe Thr Tyr Ser Pro Asp Thr Lys
850 855 860

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Val	Leu	Asp	Ile	Cys	Val	Ser	Leu	Leu	Met	Gly	Glu	Gln	Phe	Leu	Val
865					870					875					880

Ser Trp Cys