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<110> Syngenta Crop Protection AG

<120> Nucleic Acid Molecules for Conferring Insecticidal Properties in Plants

<130> 82347-WO-REG-ORG-P-1

<150> US 63/183672

<151> 2021-05-04

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<211> 1169

<212> PRT

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<223> Synthetic polypeptide

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Val Ala Glu Ile His Leu Lys Ile Thr Arg Leu Ile Leu Glu Asn Phe

35 40 45

Leu Pro Gly Gly Ser Phe Ala Phe Gly Leu Phe Asp Leu Ile Trp Gly

50 55 60

Ile Phe Asn Glu Asp Gln Trp Ser Ala Phe Leu Arg Gln Val Glu Glu

65 70 75 80

Leu Ile Asn Gln Arg Ile Thr Glu Phe Ala Arg Gly Gln Ala Ile Gln

85 90 95

Arg Leu Val Gly Phe Gly Arg Ser Tyr Asp Glu Tyr Ile Leu Ala Leu

100 105 110

Lys Glu Trp Glu Asn Asp Pro Asp Asn Pro Ala Ser Lys Glu Arg Val

115 120 125

Arg Thr Arg Phe Arg Thr Thr Asp Asp Ala Leu Leu Thr Gly Val Pro

130 135 140

Leu Met Ala Ile Pro Gly Phe Glu Leu Ala Thr Leu Ser Val Tyr Ala

145 150 155 160

Gln Ser Ala Asn Leu His Leu Ala Leu Leu Arg Asp Ala Val Phe Phe

165 170 175

Gly Glu Arg Trp Gly Leu Thr Gln Thr Asn Ile Asn Asp Leu Tyr Ser

180 185 190

Arg Leu Lys Asn Ser Ile Arg Asp Tyr Thr Asn His Cys Val Arg Phe

195 200 205

Tyr Asn Ile Gly Leu Gly Asn Leu Asn Val Ile Arg Pro Glu Tyr Tyr

210 215 220

Arg Phe Gln Arg Glu Leu Thr Ile Ser Val Leu Asp Leu Val Ala Leu

225 230 235 240

Phe Pro Asn Tyr Asp Ile Arg Thr Tyr Pro Ile Pro Thr Lys Ser Gln

245 250 255

Leu Thr Arg Glu Ile Tyr Thr Asp Pro Ile Ile Ser Pro Gly Ala Gln

260 265 270

Ala Gly Tyr Thr Leu Gln Asp Val Leu Arg Glu Pro His Leu Met Asp

275 280 285

Phe Leu Asn Arg Leu Ile Ile Tyr Thr Gly Glu Tyr Arg Gly Ile Arg

290 295 300

His Trp Ala Gly His Glu Val Glu Ser Ser Arg Thr Gly Met Met Thr

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Asn Ile Arg Phe Pro Leu Tyr Gly Thr Ala Ala Thr Ala Glu Pro Thr

325 330 335

Arg Phe Ile Thr Pro Ser Thr Phe Pro Gly Leu Asn Leu Phe Tyr Arg

340 345 350

Thr Leu Ser Ala Pro Ile Phe Arg Asp Glu Pro Gly Ala Asn Ile Ile

355 360 365

Ile Arg Tyr Arg Thr Ser Leu Val Glu Gly Val Gly Phe Ile Gln Pro

370 375 380

Asn Asn Gly Glu Gln Leu Tyr Arg Val Arg Gly Thr Leu Asp Ser Leu

385 390 395 400

Asp Gln Leu Pro Leu Glu Gly Glu Ser Ser Leu Thr Glu Tyr Ser His

405 410 415

Arg Leu Cys His Val Arg Phe Ala Gln Ser Leu Arg Asn Ala Glu Pro

420 425 430

Leu Asp Tyr Ala Arg Val Pro Met Phe Ser Trp Thr His Arg Ser Ala

435 440 445

Thr Pro Thr Asn Thr Ile Asp Pro Asp Val Ile Thr Gln Ile Pro Leu

450 455 460

Val Lys Ala His Thr Leu Gln Ser Gly Thr Thr Val Val Lys Gly Pro

465 470 475 480

Gly Phe Thr Gly Gly Asp Ile Leu Arg Arg Thr Ser Gly Gly Pro Phe

485 490 495

Ala Phe Ser Asn Val Asn Leu Asp Trp Asn Leu Ser Gln Arg Tyr Arg

500 505 510

Ala Arg Ile Arg Tyr Ala Ser Thr Thr Asn Leu Arg Met Tyr Val Thr

515 520 525

Ile Ala Gly Glu Arg Ile Phe Ala Gly Gln Phe Asn Lys Thr Met Asn

530 535 540

Thr Gly Asp Pro Leu Thr Phe Gln Ser Phe Ser Tyr Ala Thr Ile Asp

545 550 555 560

Thr Ala Phe Thr Phe Pro Thr Lys Ala Ser Ser Leu Thr Val Gly Ala

565 570 575

Asp Thr Phe Ser Ser Gly Asn Glu Val Tyr Val Asp Arg Phe Glu Leu

580 585 590

Ile Pro Val Thr Ala Thr Phe Glu Ala Glu Tyr Asp Leu Glu Lys Ala

595 600 605

Gln Lys Ala Val Asn Ala Leu Phe Thr Ser Ser Asn Gln Ile Gly Leu

610 615 620

Lys Thr Asp Val Thr Asp Tyr His Ile Asp Lys Val Ser Asn Leu Val

625 630 635 640

Glu Cys Leu Ser Asp Glu Phe Cys Leu Asp Glu Lys Arg Glu Leu Ser

645 650 655

Glu Lys Val Lys His Ala Lys Arg Leu Cys Asp Glu Arg Asn Leu Leu

660 665 670

Gln Asp Pro Asn Phe Arg Gly Ile Asn Arg Gln Pro Asp Arg Gly Trp

675 680 685

Arg Gly Ser Thr Asp Ile Thr Ile Gln Gly Gly Asp Asp Val Phe Lys

690 695 700

Glu Asn Tyr Val Thr Leu Pro Gly Thr Phe Asp Glu Cys Tyr Pro Thr

705 710 715 720

Tyr Leu Tyr Gln Lys Ile Asp Glu Ser Lys Leu Lys Ala Tyr Thr Arg

725 730 735

Tyr Glu Leu Arg Gly Tyr Ile Glu Asp Ser Gln Asp Leu Glu Ile Tyr

740 745 750

Leu Ile Arg Tyr Asn Ala Lys His Glu Thr Val Asn Val Pro Gly Thr

755 760 765

Gly Ser Leu Trp Pro Leu Ser Ala Gln Ser Pro Ile Gly Lys Cys Gly

770 775 780

Glu Pro Asn Arg Cys Ala Thr His Leu Glu Trp Asn Pro Asp Leu Asp

785 790 795 800

Cys Ser Cys Arg Asp Gly Glu Lys Cys Ala His His Ser His His Phe

805 810 815

Ser Leu Asp Ile Asp Val Gly Cys Thr Asp Leu Asn Glu Asp Leu Gly

820 825 830

Val Trp Val Ile Phe Lys Ile Lys Thr Gln Asp Gly His Ala Arg Leu

835 840 845

Gly Asn Leu Glu Phe Leu Glu Glu Lys Pro Leu Val Gly Glu Ala Leu

850 855 860

Ala Arg Val Lys Arg Ala Glu Lys Lys Trp Arg Asp Lys Arg Glu Lys

865 870 875 880

Leu Glu Leu Glu Thr Asn Ile Val Tyr Lys Glu Ala Lys Lys Ser Val

885 890 895

Asp Ala Leu Phe Val Asn Ser Gln Tyr Asp Arg Leu Gln Ala Asp Thr

900 905 910

Asn Ile Ala Ile Ile His Ala Ala Asp Lys Arg Val His Ser Ile Arg

915 920 925

Glu Ala Tyr Leu Pro Glu Leu Ser Val Ile Pro Gly Val Asn Ala Ala

930 935 940

Ile Phe Glu Glu Leu Glu Gly Arg Ile Phe Thr Ala Tyr Ser Leu Tyr

945 950 955 960

Asp Ala Arg Asn Val Ile Lys Asn Gly Asp Phe Asn Asn Gly Leu Ser

965 970 975

Cys Trp Asn Val Lys Gly His Val Asp Val Glu Glu Gln Asn Asn His

980 985 990

Arg Ser Val Leu Val Val Pro Glu Trp Glu Ala Glu Val Ser Gln Glu

995 1000 1005

Val Arg Val Cys Pro Gly Arg Gly Tyr Ile Leu Arg Val Thr Ala

1010 1015 1020

Tyr Lys Glu Gly Tyr Gly Glu Gly Cys Val Thr Ile His Glu Ile

1025 1030 1035

Glu Asp Asn Thr Asp Glu Leu Lys Phe Ser Asn Cys Val Glu Glu

1040 1045 1050

Glu Ile Tyr Pro Asn Asn Thr Val Thr Cys Asn Asp Tyr Thr Ala

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Thr Gln Glu Glu Tyr Glu Gly Thr Tyr Thr Ser Arg Asn Arg Gly

1070 1075 1080

Tyr Asp Gly Ala Tyr Glu Ser Asn Ser Ser Val Pro Ala Asp Tyr

1085 1090 1095

Ala Ser Ala Tyr Glu Glu Lys Ala Tyr Thr Asp Gly Arg Arg Asp

1100 1105 1110

Asn Thr Cys Glu Ser Asn Arg Gly Tyr Gly Asp Tyr Thr Pro Leu

1115 1120 1125

Pro Ala Gly Tyr Val Thr Lys Glu Leu Glu Tyr Phe Pro Glu Thr

1130 1135 1140

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1160 1165

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<213> Artificial sequence

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<223> Synthetic polynucleotide

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cacggccgtt tagcgcgtgt ttacaacaag ctgtaa 1176

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<211> 391

<212> PRT

<213> Artificial sequence

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<223> Synthetic polypeptide

<400> 6

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35 40 45

Gln Asn Ala Ala Gly Asp Ile Val Ser Leu Arg Asp Val Ile Glu Ser

50 55 60

Asp Lys Ser Thr Leu Leu Gly Glu Ala Val Ala Lys Arg Phe Gly Glu

65 70 75 80

Leu Pro Phe Leu Phe Lys Val Leu Cys Ala Ala Gln Pro Leu Ser Ile

85 90 95

Gln Val His Pro Asn Lys His Asn Ser Glu Ile Gly Phe Ala Lys Glu

100 105 110

Asn Ala Ala Gly Ile Pro Met Asp Ala Ala Glu Arg Asn Tyr Lys Asp

115 120 125

Pro Asn His Lys Pro Glu Leu Val Phe Ala Leu Thr Pro Phe Leu Ala

130 135 140

Met Asn Ala Phe Arg Glu Phe Ser Glu Ile Val Ser Leu Leu Gln Pro

145 150 155 160

Val Ala Gly Ala His Pro Ala Ile Ala His Phe Leu Gln Gln Pro Asp

165 170 175

Ala Glu Arg Leu Ser Glu Leu Phe Ala Ser Leu Leu Asn Met Gln Gly

180 185 190

Glu Glu Lys Ser Arg Ala Leu Ala Ile Leu Lys Ser Ala Leu Asp Ser

195 200 205

Gln Gln Gly Glu Pro Trp Gln Thr Ile Arg Leu Ile Ser Glu Phe Tyr

210 215 220

Pro Glu Asp Ser Gly Leu Phe Ser Pro Leu Leu Leu Asn Val Val Lys

225 230 235 240

Leu Asn Pro Gly Glu Ala Met Phe Leu Phe Ala Glu Thr Pro His Ala

245 250 255

Tyr Leu Gln Gly Val Ala Leu Glu Val Met Ala Asn Ser Asp Asn Val

260 265 270

Leu Arg Ala Gly Leu Thr Pro Lys Tyr Ile Asp Ile Pro Glu Leu Val

275 280 285

Ala Asn Val Lys Phe Glu Ala Lys Pro Ala Asn Gln Leu Leu Thr Gln

290 295 300

Pro Val Lys Gln Gly Ala Glu Leu Asp Phe Pro Ile Pro Val Asp Asp

305 310 315 320

Phe Ala Phe Ser Leu His Asp Leu Ser Asp Lys Glu Thr Thr Ile Ser

325 330 335

Gln Gln Ser Ala Ala Ile Leu Phe Cys Val Glu Gly Asp Ala Thr Leu

340 345 350

Trp Lys Gly Ser Gln Gln Leu Gln Leu Lys Pro Gly Glu Ser Ala Phe

355 360 365

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<211> 10641

<212> DNA

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<223> Synthetic polynucleotide

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