

SEQUENCE LISTING

<110> Roche Diagnostics GmbH

F. Hoffmann-La Roche AG

<120> Chaperone-chaperone fusion polypeptides for reduction of
interferences and stabilization of immunoassays

<130> 31185 WO-IR

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<151> 2012-09-06

<160> 9

<170> PatentIn version 3.5

<210> 1

<211> 529

<212> PRT

<213> Artificial Sequence

<220>

<223> Skp tandem SlyD

<400> 1

Ala Asp Lys Ile Ala Ile Val Asn Met Gly Ser Leu Phe Gln Gln Val

1

5

10

15

Ala Gln Lys Thr Gly Val Ser Asn Thr Leu Glu Asn Glu Phe Arg Gly

20

25

30

Arg Ala Ser Glu Leu Gln Arg Met Glu Thr Asp Leu Gln Ala Lys Met

35

40

45

Lys Lys Leu Gln Ser Met Lys Ala Gly Ser Asp Arg Thr Lys Leu Glu

50

55

60

Lys Asp Val Met Ala Gln Arg Gln Thr Phe Ala Gln Lys Ala Gln Ala

65

70

75

80

Phe Glu Gln Asp Arg Ala Arg Arg Ser Asn Glu Glu Arg Gly Lys Leu

85

90

95

Val Thr Arg Ile Gln Thr Ala Val Lys Ser Val Ala Asn Ser Gln Asp

100

105

110

Ile Asp Leu Val Val Asp Ala Asn Ala Val Ala Tyr Asn Ser Ser Asp

115

120

125

Val Lys Asp Ile Thr Ala Asp Val Leu Lys Gln Val Lys Gly Gly Gly

130

135

140

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly

145

150

155

160

Ser Gly Gly Gly Met Lys Val Ala Lys Asp Leu Val Val Ser Leu Ala

165

170

175

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

180

185

190

Ser Ala Pro Leu Asp Tyr Leu His Gly His Gly Ser Leu Ile Ser Gly

195

200

205

Leu Glu Thr Ala Leu Glu Gly His Glu Val Gly Asp Lys Phe Asp Val

210

215

220

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

225

230

235

240

Gln Arg Val Pro Lys Asp Val Phe Met Gly Val Asp Glu Leu Gln Val

245

250

255

Gly Met Arg Phe Leu Ala Glu Thr Asp Gln Gly Pro Val Pro Val Glu

260

265

270

Ile Thr Ala Val Glu Asp Asp His Val Val Val Asp Gly Asn His Met

275

280

285

Leu Ala Gly Gln Asn Leu Lys Phe Asn Val Glu Val Val Ala Ile Arg

290

295

300

Glu Ala Thr Glu Glu Glu Leu Ala His Gly His Val His Gly Ala His

305

310

315

320

Asp His His His Asp His Asp His Asp Gly Gly Gly Ser Gly Gly Gly

325

330

335

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly

340

345

350

Met Lys Val Ala Lys Asp Leu Val Val Ser Leu Ala Tyr Gln Val Arg

355

360

365

Thr Glu Asp Gly Val Leu Val Asp Glu Ser Pro Val Ser Ala Pro Leu

370

375

380

Asp Tyr Leu His Gly His Gly Ser Leu Ile Ser Gly Leu Glu Thr Ala

385

390

395

400

Leu Glu Gly His Glu Val Gly Asp Lys Phe Asp Val Ala Val Gly Ala

405

410

415

Asn Asp Ala Tyr Gly Gln Tyr Asp Glu Asn Leu Val Gln Arg Val Pro

420

425

430

Lys Asp Val Phe Met Gly Val Asp Glu Leu Gln Val Gly Met Arg Phe

435

440

445

Leu Ala Glu Thr Asp Gln Gly Pro Val Pro Val Glu Ile Thr Ala Val

450

455

460

Glu Asp Asp His Val Val Val Asp Gly Asn His Met Leu Ala Gly Gln

465

470

475

480

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

485

490

495

Glu Glu Leu Ala His Gly His Val His Gly Ala His Asp His His His

500

505

510

Asp His Asp His Asp Gly Gly Gly Ser His His His His His His His

515

520

525

His

<210> 2

<211> 161

<212> PRT

<213> escherichia coli

<400> 2

Met Lys Lys Trp Leu Leu Ala Ala Gly Leu Gly Leu Ala Leu Ala Thr

1

5

10

15

Ser Ala Gln Ala Ala Asp Lys Ile Ala Ile Val Asn Met Gly Ser Leu

20

25

30

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

35

40

45

Glu Phe Lys Gly Arg Ala Ser Glu Leu Gln Arg Met Glu Thr Asp Leu

50

55

60

Gln Ala Lys Met Lys Lys Leu Gln Ser Met Lys Ala Gly Ser Asp Arg

65

70

75

80

Thr Lys Leu Glu Lys Asp Val Met Ala Gln Arg Gln Thr Phe Ala Gln

85

90

95

Lys Ala Gln Ala Phe Glu Gln Asp Arg Ala Arg Arg Ser Asn Glu Glu

100

105

110

Arg Gly Lys Leu Val Thr Arg Ile Gln Thr Ala Val Lys Ser Val Ala

115

120

125

Asn Ser Gln Asp Ile Asp Leu Val Val Asp Ala Asn Ala Val Ala Tyr

130

135

140

Asn Ser Ser Asp Val Lys Asp Ile Thr Ala Asp Val Leu Lys Gln Val

145

150

155

160

Lys

<210> 3

<211> 196

<212> PRT

<213> escherichia coli

<400> 3

Met Lys Val Ala Lys Asp Leu Val Val Ser Leu Ala Tyr Gln Val Arg

1

5

10

15

Thr Glu Asp Gly Val Leu Val Asp Glu Ser Pro Val Ser Ala Pro Leu

20

25

30

Asp Tyr Leu His Gly His Gly Ser Leu Ile Ser Gly Leu Glu Thr Ala

35

40

45

Leu Glu Gly His Glu Val Gly Asp Lys Phe Asp Val Ala Val Gly Ala

50

55

60

Asn Asp Ala Tyr Gly Gln Tyr Asp Glu Asn Leu Val Gln Arg Val Pro

65

70

75

80

Lys Asp Val Phe Met Gly Val Asp Glu Leu Gln Val Gly Met Arg Phe

85

90

95

Leu Ala Glu Thr Asp Gln Gly Pro Val Pro Val Glu Ile Thr Ala Val

100

105

110

Glu Asp Asp His Val Val Val Asp Gly Asn His Met Leu Ala Gly Gln

115

120

125

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

130

135

140

Glu Glu Leu Ala His Gly His Val His Gly Ala His Asp His His His

145

150

155

160

Asp His Asp His Asp Gly Cys Cys Gly Gly His Gly His Asp His Gly

165

170

175

His Glu His Gly Gly Glu Gly Cys Cys Gly Gly Lys Gly Asn Gly Gly

180

185

190

Cys Gly Cys His

195

<210> 4

<211> 23

<212> PRT

<213> artificial sequence

<220>

<223> Glycine-rich spacer

<400> 4

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly
20

<210> 5

<211> 12

<212> PRT

<213> artificial sequence

<220>

<223> octa-histidine tag

<400> 5

Gly Gly Gly Ser His His His His His His His His
1 5 10

<210> 6

<211> 270

<212> PRT

<213> escherichia coli

<400> 6

Met Lys Ser Leu Phe Lys Val Thr Leu Leu Ala Thr Thr Met Ala Val

1 5 10 15

Ala Leu His Ala Pro Ile Thr Phe Ala Ala Glu Ala Ala Lys Pro Ala

20 25 30

Thr Ala Ala Asp Ser Lys Ala Ala Phe Lys Asn Asp Asp Gln Lys Ser

35 40 45

Ala Tyr Ala Leu Gly Ala Ser Leu Gly Arg Tyr Met Glu Asn Ser Leu

50 55 60

Lys Glu Gln Glu Lys Leu Gly Ile Lys Leu Asp Lys Asp Gln Leu Ile

65 70 75 80

Ala Gly Val Gln Asp Ala Phe Ala Asp Lys Ser Lys Leu Ser Asp Gln

85 90 95

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

100 105 110

Ala Gln Ala Lys Met Glu Lys Asp Ala Ala Asp Asn Glu Ala Lys Gly

115 120 125

Lys Glu Tyr Arg Glu Lys Phe Ala Lys Glu Lys Gly Val Lys Thr Ser

130

135

140

Ser Thr Gly Leu Val Tyr Gln Val Val Glu Ala Gly Lys Gly Glu Ala

145

150

155

160

Pro Lys Asp Ser Asp Thr Val Val Val Asn Tyr Lys Gly Thr Leu Ile

165

170

175

Asp Gly Lys Glu Phe Asp Asn Ser Tyr Thr Arg Gly Glu Pro Leu Ser

180

185

190

Phe Arg Leu Asp Gly Val Ile Pro Gly Trp Thr Glu Gly Leu Lys Asn

195

200

205

Ile Lys Lys Gly Gly Lys Ile Lys Leu Val Ile Pro Pro Glu Leu Ala

210

215

220

Tyr Gly Lys Ala Gly Val Pro Gly Ile Pro Pro Asn Ser Thr Leu Val

225

230

235

240

Phe Asp Val Glu Leu Leu Asp Val Lys Pro Ala Pro Lys Ala Asp Ala

245

250

255

Lys Pro Glu Ala Asp Ala Lys Ala Ala Asp Ser Ala Lys Lys

260

265

270

<210> 7

<211> 149

<212> PRT

<213> escherichia coli

<400> 7

Met Ser Glu Ser Val Gln Ser Asn Ser Ala Val Leu Val His Phe Thr
1 5 10 15

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

Lys Pro Ala Leu Phe Arg Leu Gly Asp Ala Ser Leu Ser Glu Gly Leu
35 40 45

Glu Gln His Leu Leu Gly Leu Lys Val Gly Asp Lys Thr Thr Phe Ser
50 55 60

Leu Glu Pro Asp Ala Ala Phe Gly Val Pro Ser Pro Asp Leu Ile Gln
65 70 75 80

Tyr Phe Ser Arg Arg Glu Phe Met Asp Ala Gly Glu Pro Glu Ile Gly
85 90 95

Ala Ile Met Leu Phe Thr Ala Met Asp Gly Ser Glu Met Pro Gly Val
100 105 110

Ile Arg Glu Ile Asn Gly Asp Ser Ile Thr Val Asp Phe Asn His Pro
115 120 125

Leu Ala Gly Gln Thr Val His Phe Asp Ile Glu Val Leu Glu Ile Asp
130 135 140

Pro Ala Leu Glu Ala

145

<210> 8

<211> 199

<212> PRT

<213> *pasteurella multocida*

<400> 8

Met Lys Ile Ala Lys Asn Val Val Val Ser Ile Ala Tyr Gln Val Arg

1 5 10 15

Thr Glu Asp Gly Val Leu Val Asp Glu Ala Pro Val Asn Gln Pro Leu

20 25 30

Glu Tyr Leu Gln Gly His Asn Asn Leu Val Ile Gly Leu Glu Asn Ala

35 40 45

Leu Glu Gly Lys Ala Val Gly Asp Lys Phe Glu Val Arg Val Lys Pro

50 55 60

Glu Glu Ala Tyr Gly Glu Tyr Asn Glu Asn Met Val Gln Arg Val Pro

65 70 75 80

Lys Asp Val Phe Gln Gly Val Asp Glu Leu Val Val Gly Met Arg Phe

85 90 95

Ile Ala Asp Thr Asp Ile Gly Pro Leu Pro Val Val Ile Thr Glu Val

100

105

110

Ala Glu Asn Asp Val Val Val Asp Gly Asn His Met Leu Ala Gly Gln

115

120

125

Glu Leu Leu Phe Ser Val Glu Val Val Ala Thr Arg Glu Ala Thr Leu

130

135

140

Glu Glu Ile Ala His Gly His Ile His Gln Glu Gly Gly Cys Cys Gly

145

150

155

160

Gly His His His Asp Ser Asp Glu Glu Gly His Gly Cys Gly Cys Gly

165

170

175

Ser His His His His Glu His Glu His His Ala His Asp Gly Cys Cys

180

185

190

Gly Asn Gly Gly Cys Lys His

195

<210> 9

<211> 487

<212> PRT

<213> Artificial

<220>

<223> Skp SlpA SlpA

<400> 9

Ala Asp Lys Ile Ala Ile Val Asn Met Gly Ser Leu Phe Gln Gln Val

1 5 10 15

Ala Gln Lys Thr Gly Val Ser Asn Thr Leu Glu Asn Glu Phe Arg Gly

20 25 30

Arg Ala Ser Glu Leu Gln Arg Met Glu Thr Asp Leu Gln Ala Lys Met

35 40 45

Lys Lys Leu Gln Ser Met Lys Ala Gly Ser Asp Arg Thr Lys Leu Glu

50 55 60

Lys Asp Val Met Ala Gln Arg Gln Thr Phe Ala Gln Lys Ala Gln Ala

65 70 75 80

Phe Glu Gln Asp Arg Ala Arg Arg Ser Asn Glu Glu Arg Gly Lys Leu

85 90 95

Val Thr Arg Ile Gln Thr Ala Val Lys Ser Val Ala Asn Ser Gln Asp

100 105 110

Ile Asp Leu Val Val Asp Ala Asn Ala Val Ala Tyr Asn Ser Ser Asp

115 120 125

Val Lys Asp Ile Thr Ala Asp Val Leu Lys Gln Val Lys Gly Gly Gly

130 135 140

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly

145 150 155 160

Ser Gly Gly Gly Ser Glu Ser Val Gln Ser Asn Ser Ala Val Leu Val

165

170

175

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

180

185

190

Asn Asn Gly Lys Pro Ala Leu Phe Arg Leu Gly Asp Ala Ser Leu Ser

195

200

205

Glu Gly Leu Glu Gln His Leu Leu Gly Leu Lys Val Gly Asp Lys Thr

210

215

220

Thr Phe Ser Leu Glu Pro Asp Ala Ala Phe Gly Val Pro Ser Pro Asp

225

230

235

240

Leu Ile Gln Tyr Phe Ser Arg Arg Glu Phe Met Asp Ala Gly Glu Pro

245

250

255

Glu Ile Gly Ala Ile Met Leu Phe Thr Ala Met Asp Gly Ser Glu Met

260

265

270

Pro Gly Val Ile Arg Glu Ile Asn Gly Asp Ser Ile Thr Val Asp Phe

275

280

285

Asn His Pro Leu Ala Gly Gln Thr Val His Phe Asp Ile Glu Val Leu

290

295

300

Glu Ile Asp Pro Ala Leu Glu Gly Gly Gly Ser Gly Gly Gly Ser Gly

305

310

315

320

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Glu

325

330

335

Ser Val Gln Ser Asn Ser Ala Val Leu Val His Phe Thr Leu Lys Leu

340

345

350

Asp Asp Gly Thr Thr Ala Glu Ser Thr Arg Asn Asn Gly Lys Pro Ala

355

360

365

Leu Phe Arg Leu Gly Asp Ala Ser Leu Ser Glu Gly Leu Glu Gln His

370

375

380

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

385

390

395

400

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

405

410

415

Arg Arg Glu Phe Met Asp Ala Gly Glu Pro Glu Ile Gly Ala Ile Met

420

425

430

Leu Phe Thr Ala Met Asp Gly Ser Glu Met Pro Gly Val Ile Arg Glu

435

440

445

Ile Asn Gly Asp Ser Ile Thr Val Asp Phe Asn His Pro Leu Ala Gly

450

455

460

Gln Thr Val His Phe Asp Ile Glu Val Leu Glu Ile Asp Pro Ala Leu

465

470

475

480

Glu His His His His His His

485