


 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN
 10 20 30 40 50 60 70

Col-0 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDNIAPHAERIDKTNSFPKDVN 68
 Got_7 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Nc-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDNIAPHAERIDKTNSFPKDVN 68
 Sg-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-----DVN 40
 Chat-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQGFKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 69
 Mc-0 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Kelsterbach_4 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Bor-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDNIAPHAERIDKTNSFPKDVN 68
 Ga-0 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Amel-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Bay_0 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Hovdala-2 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-GFKESVSKFAQDNIAPHAERIDKTNSFPKDVN 69
 Kn-0 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Ba-1 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68
 Lp2-6 MQRFFSARSILGYAVKTRRRSFSSRSSLLFDQTQLQ-FKES-VSKFAQDIIAPHAERIDKTNSFPKDVN 68


 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY
 80 90 100 110 120 130 140

Col-0 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Got_7 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Nc-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Sg-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 110
 Chat-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 139
 Mc-0 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Kelsterbach_4 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Bor-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Ga-0 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Amel-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Bay_0 LWKLMGEFNLH--TAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 136
 Hovdala-2 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 139
 Kn-0 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Ba-1 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138
 Lp2-6 LWKLMGEFNLHGITAPEEYGGGLGLGYLYHCIAMEEISRASGSVALSYGAHNSLCINQLVRNGTAAQKEKY 138


 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK
 150 160 170 180 190 200 210

Col-0 LPKRLISGEHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 208
 Got_7 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Nc-1 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Sg-1 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 179
 Chat-1 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETL----- 196
 Mc-0 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Kelsterbach_4 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Bor-1 LPKLISG-----EHVGALAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 201
 Ga-0 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Amel-1 LPK-----GSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 190
 Bay_0 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 205
 Hovdala-2 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 208
 Kn-0 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 207
 Ba-1 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 207
 Lp2-6 LPKLISG-EHVGALAMSEPNAGSDVVGKCKAEKVDGGYILNGNKMWCTNGPSAETLVVYAKTDTKAGSK 207

GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG

220 230 240 250 260 270 280

Col-0	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	278
Got_7	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	260
Nc-1	GITAFIIEKGMT-FSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	259
Sg-1	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	249
Chat-1	-----FSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	252
Mc-0	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	260
Kelsterbach_4	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	260
Bor-1	GITAFII---F---STAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	265
Ga-0	GITAFIIEKGM--FSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	258
Amel-1	GITAFIIEKGMT-FSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	259
Bay_0	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	275
Hovdala-2	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	278
Kn-0	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	277
Ba-1	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	277
Lp2-6	GITAFIIEKGMTGFSTAQKLDKLGMRGSDTCELVFENC FVPEENILDKEGKGVYVLM SGLDLERLVLAAG	277

PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT

290 300 310 320 330 340 350

Col-0	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	348
Got_7	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	330
Nc-1	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	329
Sg-1	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	319
Chat-1	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	322
Mc-0	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	330
Kelsterbach_4	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	330
Bor-1	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	335
Ga-0	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	328
Amel-1	PLGIMQACLDTVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	329
Bay_0	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	345
Hovdala-2	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	348
Kn-0	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ-----RSYVYSVARD CDNGKVPKDCAGT	334
Ba-1	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	347
Lp2-6	PLGIMQACLDNVL PYIRQREQFGRPVGEFQFIQ GKVADMYTALQSSRSYVYSVARD CDNGKVPKDCAGT	347

ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX

360 370 380 390 400 410

Col-0	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	411
Got_7	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	393
Nc-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	392
Sg-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	382
Chat-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	385
Mc-0	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	393
Kelsterbach_4	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	393
Bor-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	398
Ga-0	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	391
Amel-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	392
Bay_0	ILCA-ERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	407
Hovdala-2	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	411
Kn-0	ILCAAERATQVSLQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEEX	397
Ba-1	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTNEIRRIVIGRELFKEEX	410
Lp2-6	ILCAAERATQVALQAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELLKEEX	410