



160 \* 180 \* 200 \* 220 \* 240 \* 260 \* 280 \* 300  
 BoCNGC15 : GRR----NGSPGYSYNKWM-----LGRILDRSRKIVQBNRNVFLLVGCATGIFVDPLFLITLSNDAC---MCLLVGGMWALTITVLRVTDLLHLHWNILIQFKIARRWFYPSGSDGDTNKG : 172  
 AtCNGC4 : GRR----NGSS--NNKWM-----LGRILDRSRKIVRERKRVFLLVGCATGIFVDPLFLITLSVSDTC---MCLLVGGMWALTITVLRVMTDLLHLHWNILIQFKIARRWFYPGGSDGDTNKG : 171  
 BoCNGC16 : IRRR----NGSSSSYNKWM-----LGRILDRSRKIVQBNRNVFLLVGCATGIFVDPLFLITISNDAC---MCLLVGGMWALTITVLRVMTDLLHLHWNILIQFKIARRWFYPGGSDGDTNKG : 172  
 BoCNGC17 : SSVLPIQEGSAPDFVRARFRRLKGF-----FGEVILDRSRKIVQRNRRALLLARGMATAVDPLFFALSIGRTTG-PACLYMGGAFAAVVTVVRCLDALHLHWNILQFKIARRWFYPSGSDGDTNKG : 193  
 AtCNGC2 : SSVLPIQEGSVNPARTRFRRLKGF-----FGEVILDRSRKIVQRNRRALLLARGMATAVDPLFFALSIGRTTG-PACLYMGGAFAAVVTVVRCLDAVHLHWNILQFKIARRWFYPSGSDGDTNKG : 200  
 BoCNGC1 : KK-PLSFNSHKNEEKRNATGTQKK-----NIDNEQGSFLQNNKIFLFAVVIATAIDPLFFIPIVDGK---RFLCNHSSIEIAASVLRIFVDAFYIHHIVFQFRTA---YVSRES---LVVGC : 161  
 AtCNGC13 : KK-PLSFGSHNKRDSNSSTITQK-----NIDNEQGSFLQNNKIFLFAVVIATAIDPLFFIPIVDGE---RFLCNHHRNEIAASVLRIFIDAFYIHHIVFQFRTA---YISPS---RVFGR : 153  
 AtCNGC10 : KK-PLSFPSSHKDPDHKETSSVTRK-----NIDNEQDSFLQNNKIFLFACVVATAIDPLFFIPIVDSA---RFLCNLTKIEIAASLLRIFIDAFYIHHIVFQFRTA---YIAPSS---RVFGR : 148  
 BoCNGC2 : KQQPLTFHSQKKNEN--KKKILIR-----VMNENDSYLQSNKIFLLLSVVATAFDPLFFIPIVDPG---RFLCNLKKIEAVACVFRIFIDAFYVVMHMFQFHTG---FIAPSS---RGFGR : 155  
 AtCNGC3 : KR-PLSVHSNKNKKNKKKILIR-----VMNENDSYLQSNKIFLLLSVVATAFDPLFFIPIVDPG---RFLCNLKKQTIACVFRIFIDAFYVVMHMFQFHTG---FITPSS---SGFGR : 157  
 AtCNGC11 : KK-----VYGMKMTLENRRKTVLLACVATAIDPLFFIPIVDSQ---RFGFTFKTAVVVCVIRIFIDTFYVIHHIYYLITE---TIAPSS---QASLR : 114  
 AtCNGC12 : KK-----VYGMKMTLENRRKTVLLACVATAIDPLFFIPIVDSQ---RFGFTFKTAVVVCVIRIFIDTFYVIHHIYYLITE---TIAPSS---QASLR : 114  
 BoCNGC3 : KK-----VYKTLNLENRRKAILLVCVATAVDPLFFIPIVDSF---RGCFTFKKAAIVATITLRFIDTFYVIHHIYYLITE---FIAPSS---QVSLR : 108  
 AtCNGC1 : KR---SYKSYSFKEAVSKGIGSTH-----KILDFQGGFLQNNKIFVLAQIPVSDPLFFIPIVDDA---KFLGIDKKIEITASVLRFTDVFYVHLIIFQFRTG---FIAPSS---RVFGR : 169  
 BoCNGC5 : GRSIGLGVSRVAFPEDLVKVEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 187  
 AtCNGC6 : GRSIGLGVSRVAFPEDLEVSEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 188  
 BoCNGC4 : GRSIGLGVSRVAFPEDLEVSEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 177  
 BoCNGC6 : GRSIGL-VSRVAFPEDLVKVEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 191  
 AtCNGC9 : GRSIGLGVSRVAFPEDLVKVEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 188  
 BoCNGC7 : GRSIGLGVSRVAFPEDLVKVEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 174  
 AtCNGC5 : GRSIGLGVSRVAFPEDLVKVEKK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 173  
 BoCNGC8 : GKS----VTRAVFPEDLRIVESEK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 175  
 AtCNGC7 : GKS----VTRAVFPEDLRIVESEK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 147  
 AtCNGC8 : GKSFTSGVTRAVFPEDLRIVESEK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 182  
 BoCNGC9 : GKSFKAKVLSRVFTEDLGRVKNK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 159  
 AtCNGC15 : GKFLKAKVLSRVFSEDLERVKTK-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 152  
 BoCNGC10 : GNRSRYTDNNKTKSSKLSWYKT-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 163  
 AtCNGC17 : GNRL-RYTDASKSKSSKVSWYKT-----IFDQDKFLLCNKLFVASCILVAVSDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 160  
 BoCNGC11 : IFKIPRFGRFKVFPENFEIERDK-----IFDQGGDVLCQNRVFLFWCLVATYVDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 160  
 BoCNGC12 : LFKLPRFGLKVFENFEIERDK-----IFDQGGDVLCQNRVFLFWCLVATYVDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 164  
 AtCNGC14 : RLKIPRFGRFKVFPENFEIERDK-----IFDQGGDVLCQNRVFLFWCLVATYVDPLFFIPIVNDK---AKCVGIDRKAIVATITLRFVIDSFYLFHMAIRFRTA---YVAPSS---RVFGR : 159  
 BoCNGC13 : --ASNRGSAVRYGSQVLPWRHQ-----IFDQSSIVTYNNHVFVLTSLAIFLDFEYFVYVYG---G-PACLSVIVGAAATVIFFRVADLFHLLHIFKFKRTA---FVARSS---RVFGR : 124  
 AtCNGC18 : --ASNRGSDGSGQFS---VLWRHQ-----IFDQSSIVTYNNHVFVLTSLAIFLDFEYFVYVYG---G-PACLSVIVGAAATVIFFRVADLFHLLHIFKFKRTA---FVARSS---RVFGR : 124  
 BoCNGC14 : --HHNNDIQNRGRSVFSELGDT-----IFDQSSIVTYNNHVFVLTSLAIFLDFEYFVYVYG---G-PACLSVIVGAAATVIFFRVADLFHLLHIFKFKRTA---FVARSS---RVFGR : 130  
 AtCNGC16 : --HHN-DPNNQRRRSIFSKLRDK-----IFDQGGDLITRNHIFLITCLLAIFLDFEYFVYVYQA---G-TACMSIDVGFILVIFFRVADLFHLLHIFKFKRTA---FVARSS---RVFGR : 129  
 BoCNGC18 : SSQPNERNHAYSRTPRVFATSDFTL-----HNALDDDAKGWA-----KYFSGTIYIESNFVQITITFFALSCLCSIFVDPLFFIPIVYKEER---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 229  
 BoCNGC19 : CPSDYNREAAQIPTPRV---SDSMV-----HNARDDDAKGWARRFATSVDKYLPKIMDENSKVQRTIFFAFSCILSIFVDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 213  
 BoCNGC20 : CPSYNNRKAQIPTRSVSAIFDS---TFH---DAKGWARRFATSINRHLPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 268  
 BoCNGC21 : CPSYNNRKAQIPSSRVSAFFDS---KFHNALYDDAKGWARRFATTANRYLPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 273  
 AtCNGC20 : CPSYNNRKAQIPTRSVSAIFDS---TFHNALYDDAKGWARRFASSVNRYPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 277  
 BoCNGC22 : CPSYNNRKAQIPPS---KLHAMCDDARGWATRFRVTSINKFLTGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 264  
 BoCNGC23 : CPSYNNRKAQIPNPTVS---AS---TFHNALYDDAKGWARRFASSVNRYPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 271  
 BoCNGC24 : CPSYNSHQANFHTS-KVSDSR-----FHTALYDDAKGWARRFASSVNRYPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 253  
 AtCNGC19 : CPSYNNRQAQLHTS-RVSASR-----FRTVLYGDARGWAKRFASSVNRYPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 243  
 BoCNGC25 : CPSYNNRQAQFHTNRVSDSR-----FRTALYDDAKGWARRFASSVNRYPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 270  
 BoCNGC26 : CPSYNNLQAQFHTYGVVSDSRTQVNATHNRQALHDYDRGWKLFASVYRRCVPGIMNHSKVFQVWTRFLAFSSLVATAIFDPLFFIPIVYQSGK---CMTIDWWTINVFVIVRSITDGLYALNIVIQFR---LAVVDLES---TVVGA : 266  
 p 6 w 6 DP15 C d R D 6 s g

\* 320 \* 340 \* 360 \* 380 \* 400 \* 420 \* 440 \*  
 BoCNGC15 : GTRVTRT--RVAPPYVKKNG--FFDIFVILPLPQVVLVWVIFSLKRGSVILVVSILLTFLFQYLPKIIYHSIRHLRRNATLSYIFGIVVWGIALNVAIFVVAHAACACWYLLGQVRSQAKLKEQCENTMG-----CDLRMSCKEPVY : 314  
 AtCNGC4 : GTRGST--RVAPPYVKKNG--FFDIFVILPLPQVVLVWVIFSLKRGSVILVVSILLTFLFQYLPKIIYHSIRHLRRNATLSYIFGIVVWGIALNVAIFVVAHAACACWYLLGQVRSQAKLKEQCENTIG-----CDLRMSCKEPVY : 313  
 BoCNGC16 : ETRVTRTISRVRAPPYVKKKGT--FFDIFVILPLPQVVLVWVIFSLKRGSVILVVSILLTFLFQYLPKIIYHSIRHLRRNATLSYIFGIVVWGIALNVAIFVVAHAACACWYLLGQVRSQAKLKEQCENTMG-----CDLRMSCKEPVY : 317  
 BoCNGC17 : GKLWDPRAIASHARSITGWFEDVIVILPVPQAVFWLWVVKLIREEKVKLIMTILLIFLFLQYLPKIIYHCICMRRMQKVTIYIFGIVVWGIALNVAIFVVAHAACACWYLLGQVRSQAKLKEQCMRTAN-----CNL-SLSCQEEVC : 337  
 AtCNGC2 : GKLWDPRAIASHARSITGWFEDVIVILPVPQAVFWLWVVKLIREEKVKLIMTILLIFLFLQYLPKIIYHCICMRRMQKVTIYIFGIVVWGIALNVAIFVVAHAACACWYLLGQVRSQAKLKEQCMRTGN-----CNL-SLSCQEEVC : 344



BoCNGC1 : GELVEDPRAIAIKYI--SSYFIDVLSILPLPQIVVLAIVNVEKPVSLIT-KDYLIIVIFAQYIPRILRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKR---QGCELR--LYCDGN : 303  
 AtCNGC13 : GELVDDPRAIAIKYI--SSYFIDVLSILPLPQIVVLAIVNVEKPVSLIT-KDYLIIVIFAQYIPRILRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKIP---EVCNFRF--LYCDGN : 296  
 AtCNGC10 : GELVDDAKAIAIKYI--SSYFIDVLSILPLPQIVVLAIVNVEKPVSLIT-KDYLFKSTIAQYVPRILRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKT---KGCNMKF--LYCENDRN : 290  
 BoCNGC2 : GELVQSYRKIAIRYI--KSYFIDVLSILPIQVQVVVLAIVPMSGRAFSLVT-KELLKWIIFCQYVPRIAIRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---KGCIHAY--LYCS-GGE : 296  
 AtCNGC3 : GELNEKHKDIALRYI--GSYFIDVLSILPIQVQVVVLAIVPRMRFPASLVA-KELLKWIIFCQYVPRIAIRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---QNCTHAY--LYCSPTGE : 299  
 AtCNGC11 : GELVVHSKATLKRTR--LFFHIVDIIISVLPQIVVLTLLP---LSASLVS-ERILKWIISQYVPRIAIRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---SDCNLTVIDLCKRAGS : 255  
 AtCNGC12 : GELVVHSKATLKRTR--LFFHIVDIIISVLPQIVVLTLLP---LSASLVS-ERILKWIISQYVPRIAIRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---SDCNLTVIDLCKRAGS : 255  
 BoCNGC3 : GELVHSDIKTRRRL--FFHIVDIIISVLPQIVVLTLLP---LSASLVS-QAILKWIILCQYVPRIAIRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---FGCNLRY--CYCARGRQ : 247  
 AtCNGC1 : GVLVEDKREIAIKRYI--SSYFIDVLSILPLPQIVVLAIVNVEKPVSLIT-KDYLIIVIFAQYIPRILRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---PPCISKL--LYCDPETA : 312  
 BoCNGC5 : GELVIDPKQIAIKRYI--QQYFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DN-CTRFN-FCGNQNM : 329  
 AtCNGC6 : GELVIDPAQIAIKRYI--QQYFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---QN-CTRFN-FCGNQNM : 330  
 BoCNGC4 : GELVIDPAQIAIKRYI--QQYFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DN-CTRFN-FCGNQNM : 319  
 BoCNGC6 : GELVIDPAQIAIKRYI--QQYFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DN-CTRFN-FCGNQNM : 334  
 AtCNGC9 : GELVIDPAQIAIKRYI--QQYFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---LD-CHRFN-FCGNQNM : 331  
 BoCNGC7 : GELVIDPAQIAIKRYI--QRWFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---KKICTGF-FCGNQNM : 318  
 AtCNGC5 : GELVIDPAQIAIKRYI--QRWFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---N--CSTDF-FCGNQNM : 315  
 BoCNGC8 : GELVIDPAKIAIRYI--TRYFIVDFLAVLPLPQIAVWKFHGSKGMVLP-LT-KTALLNIVIQYIPRFRVRIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DPKVCVQI-LYCGTKFV : 319  
 AtCNGC7 : GELVIDPAKIAIRYI--TRYFIVDFLAVLPLPQIAVWKFHGSKGMVLP-LT-KTALLNIVIQYIPRFRVRIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DPKVCVQI-LYCGTKFV : 291  
 AtCNGC8 : GELVIDPAKIAIRYI--TRYFIVDFLAVLPLPQIAVWKFHGSKGMVLP-LT-KTALLNIVIQYIPRFRVRIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DPKVCVQI-LYCGTKFV : 326  
 BoCNGC9 : GELVIDSRKIAIRYI--NKSEIIVDAALPLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---TICQYRFFECRR-LE : 301  
 AtCNGC15 : GELVIDSRKIAIRYI--NKSEIIVDAALPLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---QICQYRFFECRR-LE : 294  
 BoCNGC10 : GELVMDPRAIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---GGVNCQYLYLDCDSPLY : 308  
 AtCNGC17 : GELVMDPRAIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---GQVNCQYLYLDCDS-MY : 304  
 BoCNGC11 : GELVKDPKIAIRYI--RSDIIVDIIACPLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---APLECVTDFDCT-LH : 304  
 BoCNGC12 : GELVKDPKIAIRYI--RSDIIVDIIACPLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---GPIRCVTDFDCT-VN : 308  
 AtCNGC14 : GELVKDPKIAIRYI--RSDIIVDIIACPLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---VPLQCVTDFDCT-LH : 303  
 BoCNGC13 : GELVDRPREIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---ALRVLDCLPSFLDCKS-LQ : 270  
 AtCNGC18 : GELVMDREIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---ALRVLDCLPSFLDCKS-LE : 270  
 BoCNGC14 : GELVMDREIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---ALRVLDCLPSFLDCKS-LR : 278  
 AtCNGC16 : GELVMDREIAIRYI--KSEFIDVLSVLPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---ALRVLDCLPSFLDCKS-LH : 277  
 BoCNGC18 : GQLVDDPKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---FECKQIDCGREN : 371  
 BoCNGC19 : -----VNRCLR-----ETCEDHMLKCHGVCKELIDCGLEIK-----EKLIDCERRNT : 256  
 BoCNGC20 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---ACGNTD-----RECRELIDC-HGET : 409  
 BoCNGC21 : GQLVAHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---HECRNIDCGRGDS : 415  
 AtCNGC20 : GQLVSHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---RECQDIDCGNGS : 419  
 BoCNGC22 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---QECRELYDGHGNS : 405  
 BoCNGC23 : GQLVDRPKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---RECRGIDCGHNS : 413  
 BoCNGC24 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DERRNIDCARGNM : 396  
 AtCNGC19 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DERRNIDCARG-S : 384  
 BoCNGC25 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DERRNIDCARGVN : 412  
 BoCNGC26 : GQLVDHPRKIAIRYI--GRKFLDIIIVPQIVVWRFLYTSKGANVLT-KQALRYIVLVQYIPRFLRYIPIYSEVTRTSCIVTETAWAGAANNLSLYMLASHVFGALWYIISVEREDRCWREACEKAKI---DERRNIDCARGVN : 402

g a y f d p p q q p p l g a w 6a h g w y c C  
 460 \* 480 \* 500 \* 520 \* 540 \* 560 \* 580 \* 600  
 BoCNGC15 : YGTTEMVLDRLARLAWARNHQ---ARSVCLDSDNTYTYGAYQWTIQLVSNESR---LEILPFIWFGLMTLSTFGN-LESTTEWSEVVFNIVLTSGLLVTMLIGNIKVFLHATTS-----KQAMFLKMRN : 434  
 AtCNGC4 : YGTTEMVLDRLARLAWARNHQ---ARSVCLDINTNTYTYGAYQWTIQLVSNESR---LEILPFIWFGLMTLSTFGN-LESTTEWSEVVFNIVLTSGLLVTMLIGNIKVFLHATTS-----KQAMFLKMRN : 433  
 BoCNGC16 : YGTTEMVLDRLARLAWARNHQ---ARSICLDINTNTYTYGAYQWTIQLVSNESR---LEILPFIWFGLMTLSTFGN-LESTTEWSEVVFNIVLTSGLLVTMLIGNIKVFLHATTS-----KQAMFLKMRN : 437  
 BoCNGC17 : YQFVSPTSTVGYPCLSGNLTSVVKPEMCLDSNGEFRYGYRWALPVISSNLS---AVAILPFIWFGLMTLSTFGN-LESTTEWSEVVFNIVLTSGLLVTMLIGNIKVFLHATTS-----KQAMFLKMRN : 461  
 AtCNGC2 : YQFVSPTSTVGYPCLSGNLTSVVKPEMCLDSNGEFRYGYRWALPVISSNLS---AVAILPFIWFGLMTLSTFGN-LESTTEWSEVVFNIVLTSGLLVTMLIGNIKVFLHATTS-----KQAMFLKMRN : 468  
 BoCNGC1 : VI-----NDYLTSCF---FINPDDITNSTFNFGITDALKSGIVSD--DFWKKFFCFWGCIRNLSALGQNLKTSKFEIIFAVLTCISGLVLFALLIGNMCKYLSSTTV-----REEMRVKRRD : 418  
 AtCNGC13 : VR-----NDFLTSCF---FINPDDITNSTFNFGITDALKSGIVSD--DFWKKFFCFWGCIRNLSALGQNLKTSKFEIIFAVLTCISGLVLFALLIGNMCKYLSSTTV-----REEMRVKRRD : 411  
 AtCNGC10 : VS-----NNFLTSCF---FLDPDDITNSTFNFGITDALKSGIVSD--DFWKKFFCFWGCIRNLSALGQNLKTSKFEIIFAVLTCISGLVLFALLIGNMCKYLSSTTV-----REEMRVKRRD : 405  
 BoCNGC2 : DN-----SQYLIGSCF---LMDPEEIKNSTVFNFGITDALKSGIVSD--DFWKKFFCFWGCIRNLSALGQNLKTSKFEIIFAVLTCISGLVLFALLIGNMCKYLSSTTV-----REEMRVKRRD : 411  
 AtCNGC3 : DN-----RLFLNGSCF---LIDPEEITNSTVFNFGITDALKSGIVSD--DFWKKFFCFWGCIRNLSALGQNLKTSKFEIIFAVLTCISGLVLFALLIGNMCKYLSSTTV-----REEMRVKRRD : 414



AtCNGC1 : GG-----NAFLNESCP--IQTP---NTTIDFGTFLDALQSGVVEQ--DFPQKFFYCFWGCILQNLSSLGQNLKTSYIWIWICFAVFIISIAGLVLFHFLIGNMCTYLCSTTT-----RLEEMRVKRRD : 423  
 BoCNGC5 : EG-YAAWYAKSSVQLQKCP--VNVTEG--EPEFDFGTYSRALSSGIVSSK--RFVSKYFFCLWGCILQNLSTLGGQLETSTYPGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 450  
 AtCNGC6 : KG-YAAWDNKVSYLQKCP--VNVPEK--EPEFDFGTYLRLSSGIVSSK--RFVSKYFFCLWGCILQNLSTLGGQLETSTYPGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 451  
 BoCNGC4 : KG-YAAWDDKVPFLQKCP--VNVIDG--EPEFDFGTYLRLSSGIVSSK--RFVSKYFFCLWGCILQNLSTLGGQLETSTYPGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 440  
 BoCNGC6 : DG-YAAWNTIKESVLQKSCP--VNVIDG--DNPEFDFGTYLRLSSGIVSSK--SFVAKYFFCLWGCILQNLSTLGGQLETSTYPGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 455  
 AtCNGC9 : DG-YAAWTTIKDSVLQKCP--VNTID---NPEFDFGTYLRLSSGIVSSK--SFVSKYFFCLWGCILQNLSTLGGQLETSTYPGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 450  
 BoCNGC7 : DG-YDVVNRKTESVLQKSCR--AELDD---PNPEFDFGTYTQALSSGIVSSQ--KFITKYCYCLWGCILQNLSTLGGQLETSTYPLEIMFSTATAISGLILFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 438  
 AtCNGC5 : DG-YAVWNRKESVLKSKCR--ADLDD---NNPEFDFGTYTQALSSGIVSSQ--NFIVKYCYCLWGCILQNLSTLGGQLETSTYPMELIFSTATAISGLILFALLIGNMCTYLCSTTI-----RLEEMRVKRRD : 435  
 BoCNGC8 : SSRETEWIKTVPELLKSNCS--AKADD----ARFNKYGYGQALSSGIVSSQ--TFFSKFCYCLWGCILQNLSTLGGQLETSTYFGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTV-----RLEEMRIKRRD : 438  
 AtCNGC7 : SSGETEWIKTVPELLKSNCS--AKADD----SRFNKYGYGQALSSGIVSSQ--TFFSKFCYCLWGCILQNLSTLGGQLETSTYFGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTV-----RLEEMRIKRRD : 410  
 AtCNGC8 : SSRETDWIKTVPELLKSNCS--AKSDE----SRFNKYGYGQALSSGIVSSQ--TFFSKFCYCLWGCILQNLSTLGGQLETSTYFGEVIFSTATAIAGLLLFALLIGNMCTYLCSTTV-----RLEEMRIKRRD : 445  
 AtCNGC9 : DPQRNSWFE--WSNITTIK--PGTR-----FHEFGTYGDAVSTVTSN--FINKYFYCLWGCILKLNSSLGQNLSTSYVGEIIFAVWMATIGLVLFALLIGNMCTYLCSTTM-----RLEEMRIKRRD : 415  
 BoCNGC15 : DPQRNSWFE--WSNITTIK--PASK-----FHEFGTYGDAVSTVTSN--FINKYFYCLWGCILKLNSSLGQNLSTSYAGEIIFATITATIGLVLFALLIGNMCTYLCSTTM-----RLEEMRIKRRD : 408  
 BoCNGC10 : DARQQQWAN--VTNVFKLD--ARK-----GDFKYGFENAITKKVSSN--FNERYFYCLWGCILQNLSSYGQNLSTTTFIGETTFAVIATAIAGLVLFALLIGNMCTYLCSTTV-----RLEEMRLKRRD : 422  
 AtCNGC17 : DNNQMTWAN--VIKVFKLD--ARN-----GDFKYGFENAITKNVSSQ--FFERYFYCLWGCILQNLSSYGQNLSTTTFMGETTFAVIATAIAGLVLFALLIGNMCTYLCSTTV-----RLEEMRLKRRD : 418  
 BoCNGC11 : RPDNRNWQN--ITVVFNSCD--PSND----IRFTFGIFADALTKNVSSP--FLEKYLYCLWGCILQNLSSYGQNLDTSTSVLETMFAITVAIAGLVLFALLIGNMCTYLCSTTV-----RLEEMRLKRRD : 419  
 BoCNGC12 : RPDNRNWQN--VTVVFNSCD--PSNK----IRFTFGIFADALTKNVSSP--FLEKYLYCLWGCILQNLSSYGQNLDTSTSVLETMFAITVAIAGLVLFALLIGNMCTYLCSTTV-----RLEEMRLKRRD : 423  
 AtCNGC14 : RDDNRNWQN--TTVVFNSCD--PSNN----IQFTFGIFADALTKNVSSP--FLEKYLYCLWGCILQNLSSYGQNLDTSTSVLETMFAITVAIAGLVLFALLIGNMCTYLCSTTV-----RLEEMRLKRRD : 418  
 BoCNGC13 : QPERQYWQN--VIQVLSHD--ATSS----TTNFKFGMFAEFTTQVATID--FVSN-----SYGQNLSTSVYLGETTFCTITICIFGLILFTLLIGNMCTSLQMSV-----RVEEMRVKRRD : 373  
 AtCNGC18 : QPERQYWQN--VTQVLSHD--ATSS----TTNFKFGMFAEFTTQVATID--FVSKYLYCLWGCILRNLSSYGQNLSTSVYLGETTFCTITICIFGLILFTLLIGNMCTSLQMSV-----RVEEMRVKRRD : 386  
 AtCNGC14 : DPGRQAWMR--ITRVLSND--ARNDD---DQHFQFGMFGDAFTNDVTSPP--FFDKYFYCLWGCILRNLSSYGQSLAATLSSETIFSCFICVAGLVFHSHLIGNVNYLCSTTA-----RLEEMRVKRRD : 395  
 AtCNGC16 : DPGRQAWMR--ITRVLSND--ARNDD---DQHFQFGMFGDAFTNDVTSPP--FFDKYFYCLWGCILRNLSSYGQSLAATLSSETIFSCFICVAGLVFHSHLIGNVNYLCSTTA-----RLEEMRVKRRD : 394  
 BoCNGC18 : TEV---LHAWKINVSANACFQ-----EDGDFYGYLKAIVNLTSHNR--WYRRYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 483  
 BoCNGC19 : TVT---QAVLNWVNTAAACFQ-----ENGFYGYLKAIVNLTSHNR--LPTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 367  
 BoCNGC20 : SA--LS-AAWKDNAGASACFQ-----EDGDFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 520  
 BoCNGC21 : SE--AF-AAWKGNASASACFQ-----EDGDFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 526  
 AtCNGC20 : SV--LVRATWKDNASANACFQ-----EDGDFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 531  
 BoCNGC22 : -----HVAWKDNASAIACFQ-----EDGDFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 509  
 BoCNGC23 : NISASLRAIWRNSASANACFQ-----EDGDFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 550  
 AtCNGC24 : YASASLRAIWRNSASANACFQ-----ESGFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 510  
 AtCNGC19 : YASKSQRLWRDNASVNAACFQ-----ENGFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 498  
 BoCNGC25 : YARESQIALWRESESVNAACFQ-----EGGFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 526  
 BoCNGC26 : NLR---ALWRDSESVNAACFQ-----ESGFYGYLKAIVNLTSHNS--LFTRYYSYSLFWCFQCIQSTLAGNQVFSYFGEVIFFTMCIIGIGLFLFALLIGNMCTYLCSTLGR-----RDEMTVRRD : 512

c 5 5G 5 a g s 3 e F 6 GL 1f LIGN6q L 4 e r

BoCNGC15 : IEWWMKRRHLEFGLRQVRRNYERQFWAAMRGVDECEMVQNLEGLRDRDIKYHLCLDITVRCVPLFQRMDD--IVLENICDRVKSILFTKGETIQKEGDAVQRMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 582  
 AtCNGC4 : IEWWMKRRHLEFGLRQVRRNYERQFWAAMRGVDECEMVQNLEGLRDRDIKYHLCLDITVRCVPLFQRMDD--IVLENICDRVKSILFTKGETIQKEGDAVQRMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 581  
 BoCNGC16 : IEWWMKRRHLEGLRQVRRNYERQFWAAMRGVDECEMVQNLEGLRDRDIKYHLCLDITVRCVPLFQRMDD--IVLENICDRVKSILFTKGETIQKEGDAVQRMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 585  
 BoCNGC17 : MEWWMKRRHLEGLRQVRRNYERQFWAAMRGVDECEMVQNLEGLRDRDIKYHLCLDITVRCVPLFQRMDD--IVLENICDRVKSILFTKGETIQKEGDAVQRMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 609  
 AtCNGC2 : MEWWMKRRHLEGLRQVRRNYERQFWAAMRGVDECEMVQNLEGLRDRDIKYHLCLDITVRCVPLFQRMDD--IVLENICDRVKSILFTKGETIQKEGDAVQRMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 616  
 BoCNGC1 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 568  
 AtCNGC13 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 561  
 AtCNGC10 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 555  
 BoCNGC2 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 559  
 AtCNGC3 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 562  
 AtCNGC11 : TEKMSYRVEIHEYLRKIRRFEDYWRRTKGTDEEALLRSLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 520  
 AtCNGC12 : TEKMSYRVEIHEYLRKIRRFEDYWRRTKGTDEEALLRSLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 516  
 BoCNGC3 : TEKMSYRVEIHEYLRKIRRFEDYWRRTKGTDEEALLRSLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 514  
 AtCNGC1 : AEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 573  
 BoCNGC5 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 600  
 AtCNGC6 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 601  
 BoCNGC4 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 590  
 BoCNGC6 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 605  
 AtCNGC9 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 600  
 BoCNGC7 : SEQNMHRMLEHDLRKRIRRYEQFWQETRGVDEEENLVNLEKDLRDIKRRHCLDILKVVPLFENMDE--QLLDAVCDLKLFPVLYTENSAYITREGDFVEBMLFVWRGELQSSQL--LRDGVKSCCMLIGFENFSGDELLSWCRRPFVERLP : 588





AtCNGC14 : SS-----TRTVRALEDEVEAFALQAGDLKVFANQFRRLHS-KKLCQHTFRYYSHQWRRTWAACFVQVAVRRYRKRKLAKSLSLAE-SFSSYDEEEAVA-VAATEEMSHEGEAQSGAKARHHTSNVKPH----FAATILASRFKANTRR- : 701  
 BoCNGC13 : SS-----TRSVRAISEVEAFALSIEDLKEVAHQFKRLQS-KKLCQAFRYYSHQNRWAGACEVQSAWRRYRKRKLAKELSLHE-SSGYYYRDETGYNEEGDE--ENYYGSDDDDFEGERLSVDNTNNSQNLGATMLASKFAANTRRG : 660  
 AtCNGC18 : SS-----TRSVRAISEVEAFALSIEDLKEVAHQFKRLQS-KKLCQAFRYYSHQNRWAGACEVQSAWRRYRKRKLAKELSLHE-SSGYYYRDETGYNEEDEETREYYYSDE--EGG--SMDNTN---LGATILASKFAANTRRG : 666  
 BoCNGC14 : LS-----TRTVRTLSEVEAFALRAEDLKEVFANQFRRLHS-KKLCQAFRYYSHQNRWAGTGFQAAWRRYRKRKLAMELARQEEGDDYYDDDDDDQYGGEDMPESNN-VDDN-----SSNNQN----LSATILASKFAANTKRG : 674  
 AtCNGC16 : LS-----TRTVRTLSEVEAFALRAEDLKEVFANQFRRLHS-KKLCQAFRYYSHQNRWAGTGFQAAWRRYRKRKLAMELARQEEEDDYFYDDDDGYQF--EEDMPESNNNGDEN-----SSNNQN----LSATILASKFAANTKRG : 673  
 BoCNGC18 : TMIRMPSKGLLSRDVWCVTNVEAFSLSVADLEDTISLFPNLEIPKEP----- : 674  
 BoCNGC19 : TMIRMPSKGLISRAVWCVTNVEAFSLSVADLEDTISLFPNLEIPKEP----- : 558  
 BoCNGC20 : TRIRMPSKGLLSRNVRQVTVNVEAFSLSVADLEDTISLFSFLRSNRVQGAIRYSPYWRRLRAAMCIQVAVRYYRRRLQRLYTDQS-SYSL----- : 753  
 BoCNGC21 : TRIRIPSKGLLSYRNVRQVTVNVEAFSLSVADLEDTISLFSFLRNPRVQGAIRYSPYWRRLRAARCIQVAVRYYRRRLQRLYTAQS-SYSL----- : 759  
 AtCNGC20 : TRIRMPSKGLLSRNVRQVTVNVEAFSLSVADLEDTISLFSFLRSNRVQGAIRYSPYWRRLRAARCIQVAVRYYRRRLHRLCTPQS-SYSL----- : 764  
 BoCNGC22 : TRIRMPSKGLVSNRNVRQVTVNVEAFSLSVADLEDTISLFLRTHREQGAIRYSPYWRRLRAARCIQVAVRYYRRRLQRFYSAQS-SYSL----- : 734  
 BoCNGC23 : ---RMLSKGLLSRNVRQVTVNVEAFSLSVADLEDTISLFLRSHRVQGAIRYSPYWRRLRAARCIQVAVRYYRKLRLKSTAQKQYSLELIKDMART----- : 789  
 BoCNGC24 : RSIKLPLKGLVSNRSVRCVTVNVEAFSLSVADLEDTISLFSFLRSHRVQGAIRYSPYWRRLRAARCIQVAVRYYRRRLHRLYTAQSTSR-- : 743  
 AtCNGC19 : TRIKMPPKGLVSNRNVRQVTVNVEAFSLSVADLEDTISLFSFLRSHRVQGAIRYSPYWRRLRAAMCIQVAVRYYRKLRLKSTAHSSNR-- : 729  
 BoCNGC25 : TRIKMPKGLVSNRNVRQVTVNVEAFSLSVADLEDTISLFSFLRSHRVQGAIRYSPYWRRLRAAMCIQVAVRYYRKLRLKSTAHSSNR-- : 781  
 BoCNGC26 : TRIKMPKGLVSNRSVRCVTVNVEAFSLSVADLEDTISLFSFLRSNRVQGAIRYSPYWRRLRAAMCIQVAVRYYRKLRLERR--KQNGEMDE----- : 744

r                    x                    r                    r                    s                    w                    aa                    q                    aw

BoCNGC15 : LRLYTAILTS-----PKPNPDDDDY----- : 695  
 AtCNGC4 : LRLYAAIILTS-----PKPNPDDDDY----- : 694  
 BoCNGC16 : LRLYTAILTS-----PKPNPDDDDY----- : 698  
 BoCNGC17 : LLQYAAFMFS-----IRPH-DHLE----- : 716  
 AtCNGC2 : LLQYAAFMFS-----IRPH-DHLE----- : 726  
 BoCNGC1 : LRQHNT-----LPLLPPKPEPDEFGVDDD----- : 704  
 AtCNGC13 : LRTNN-----LPLLPPKPEPDESLRNPYASRFASHALRNLRANAAARNRFPHMLTLLEQKPADPEFPMDDET : 742  
 AtCNGC10 : LRHNISNL-----PFRYLPLLPKQKTEPDEFTANHTTDP----- : 706  
 BoCNGC2 : VRANAAAARN-----SMLPHMLSLLPKQKPADPEFPMDDET----- : 703  
 AtCNGC3 : ----- : -  
 AtCNGC11 : TLQNDDSG-----GNKLNIGAAIYA----- : 621  
 AtCNGC12 : RRKDTADC-----SSSPDMSPPVPHKPADLEFAKAEA----- : 649  
 BoCNGC3 : RQKNAANC-----SISPHMLPPIPHKPADPEFSKN----- : 649  
 AtCNGC1 : IRRSGSVRKP-----RMPFERPMLLQKPAEPDENSDD----- : 716  
 BoCNGC5 : VHKNRIRKSNL-----APFSTRELVKFKKPEPDEFSADC----- : 745  
 AtCNGC6 : VHKNRTAKSTL-----LLSSTRELVKFKKPEPDEFSADH----- : 747  
 AtCNGC9 : VHKNRIEAK-----STIELVKYQKPEPDEFSADDT----- : 733  
 BoCNGC7 : IHRNRNTRIR-----ELVKLQKPEPDEFTAEDAD----- : 721  
 AtCNGC5 : IHRNRNTRIR-----DLVKLQKPEPDEFTAD----- : 717  
 BoCNGC8 : -HRLRSTESS-----KRLNLQKPEPDEFDAE----- : 741  
 AtCNGC7 : -HRLRSESS-----KTLINLQKPEPDEFDAE----- : 709  
 AtCNGC8 : -HKLRVTESS-----KSLMNLTKPEPDEFEALDITDDLN----- : 753  
 BoCNGC9 : -SGSDSG-----MVSSIQKPEPDEFSSE----- : 684  
 AtCNGC15 : -SGSDSG-----MMSSIQKPEPDEFSSE----- : 678  
 BoCNGC10 : VAAQRVKDV-----EMPRFKKPEPDESAEPDD----- : 727  
 AtCNGC17 : VAAQRVKDV-----ELPRFKKPEPDESAEHDD----- : 720  
 BoCNGC11 : -TAHRLKDV-----EVPMLPKPEPDEFSVDGD----- : 728  
 BoCNGC12 : -ASRKIKDV-----DVPMLPKPEPDEFSVDAD----- : 733  
 AtCNGC14 : -TAHRLKDV-----EIPMLPKPEPDEFSVDD----- : 726  
 BoCNGC13 : TNQKASSSSSTGKKGSSNSLKMPPQLFKPEPDEFSMDKEDV----- : 701  
 AtCNGC18 : TNQKASSSS-TGKKGSSSTSLKMPQLFKPEPDEFSIDKEDV----- : 706  
 BoCNGC14 : VLGNRQGS-----RIDPDDPTLKMPPKPEPDEFSGEE----- : 706  
 AtCNGC16 : VLGNRQGST-----RIDPDHPTLKMPPKPEPDEFSGEE----- : 705  
 BoCNGC18 : ----- : -  
 BoCNGC19 : ----- : -  
 BoCNGC20 : ----- : -  
 BoCNGC21 : ----- : -  
 AtCNGC20 : ----- : -  
 BoCNGC22 : ----- : -  
 BoCNGC23 : ----- : -  
 BoCNGC24 : ----- : -  
 AtCNGC19 : ----- : -  
 BoCNGC25 : ----- : -  
 BoCNGC26 : ----- : -