Additional file 10. Multiple sequence alignment of CNGC-encoded proteins of *B. oleracea* and *B. rapa*. Multiple sequence alignment was performed by clustal X2 and viewed by GeneDoc software package.

	* 20 * 40 * 60 * 80 * 100 * 120 * 140 *	ł
a004537 :		- :
CNGC2 :	VISVIKKTVRRSFEKGSEKIRNFKQQPLTFHSQKKNENKKK	
a034281 :	TIQSVHENIKSVRGQLKKVYKTLKTLENWRK	
CNGC3 :	TMQSVHENIKSVRGQLKKVYKTLNTLENWRK	- :
a003323 :	VALLSSNGLKRFSFASSFSSAALYSPPLPKTKKR	
a031515 :		- :
a000937 :	PSLNAVLDNVRRGFEKGSDKIRTFKRPLSFNSHKNEEKRNATGTQMGFGRDSRVR-FKEFSSTEFGYGRRARPSLNAVLDNVRRGFEKGSDKIRTFKRPLSFNSHKNEEKRNATGTQ	
CNGC1 :	PSLNAVLNNVRRGFEKGSDKIRTFKKPLSFNSHKNEEKRNATGTC	- :
a022632 :		- :
a003081 :	MKFRLTSLTLSSCGSRVLHSSHKEGYTTISCASTNSPTMNFRPDKSVRFHDWKSDKASDVEYSEVPDGLYRRAISSISDKFHRSSLRIKMLRTSYSFKETVSKGIVS	
a020402 :	MTFASLFYHFCRASDRGLSRSSVIELAIMAGKPOTFVSVDDLDFKLFSSSSLTROHNYSSSISGPLHFIOGSHNTSGSFKKRFOKGSKGLKSIGRSLGFGVYRAVFPEDLKVS	
CNGC7 :	GSHNASGSFKKRFQKGSKGLKSIGRSLGFGVYRAVFPEDLKVS	
a024067 :		
CNGC6 :	MFDCVKKSVKSQVISGQREKFVRLDSMDSRYSQ-GSEAGLSKCTLNLQGQSRANGG-TGQGNNNNASSGSFKKGFRRGSKGLWSLGRSIGL-VSRAVFPEDLKVS	- 1
a039221 :		
CNGC4 :	ATKASSGSFKKGFRKGSEGLWSIGRSIGLGVSRAVFPEDLEVSSPEAGLNRCTLNIQRPKRFTQATKASSGSFKKGFRKGSEGLWSIGRSIGLGVSRAVFPEDLEVS	. :
a032132 :	MFDCGTNGVKSQVISGHREKFIRLESMDSRYSQSSDNTGLNKCTLNIQAPKRFAQGSKTSSGSFKKGFRKGSEGLWSIGRSIGLGVSRAVFPEDLKVS	. :
CNGC5 :		. :
a026086 :	KRASKSFREGVKIGSEGLFSIGK	. :
CNGC8 :		
a008733 :		
CNGC13 :		
a018089 :	FPTAFSRRHHNNNDLQNQRGRSVFSELGMSNLHLHTSARFRNFPTAFSRRHHNNNDLQNQRGRSVFSELG	
	FPTAFSRRHNNNDLQNQRGRSVFSELGMSNLHLHTSARFRNMSNLHLHTSARFRN	
	PIAFSkKHNNNDLQNQkGkSVFSELGMSNLHLHISAKFKNMELRKDKILMLYSDKKEPKEAIWAVN-DPMSKSYKLSLPSALKPPDNNLLSGNRISRYTDNNKSKSSKPSWMELRKDKILMLYSDKKEPKEAIWAVN-DPMSKSYKLSLPSALKPPDNNLLSGNRISRYTDNNKSKSSKPSW	
a011186 :	YKLSLPSALKPPDNNLLSGNRISKIIDNKSKSSKPSWMELKKDKILMLYSDKKEPKEAIWAVN-DPMSKSYKLSLPSALKPPDNNLLSGNRISKIIDNKKKSSKLSWMELSKDKLLMLYSDKKEPKEAIWAVN-DPMSKSYKLSLPSALKPPDNLLAGNRISRYIDNNKTKSSKLSW	
CNGC10 :	YKLSLPSALKPPPDNLLAGNRISKYTDNNKTKSSKLSWMELSKDKLLMLYSDKKEPKEAIWAVN-DPMSKSYKLSLPSALKPPPDNLLAGNRISKYTDNNKTKSSKLSW	
a007839 :		•
CNGC12 :	PEFKRDNIVRFYGEEKQILEATEKRQPLPMLKPSTTQFLKPELVIPKKINKTRLFKLPRFGGLKVFPENFEIE	•
a032081 :		•
CNGC11 :		
a011963 :		•
CNGC9 :	GKSFKAKVLSRVFTEDLGRVMGYGNSRSVRFEEDSEVTKPQAVHEETAEKLKFKINGAQISPRKNVKKMTRGKSFKAKVLSRVFTEDLGRVMGYGNSRSVRFEEDSEVTKPQAVHEETAEKLKFKINGAQISPRKNVKKMTRGKSFKAKVLSRVFTEDLGRV	•
a021266 :	MASPKENDDVPML-PISDTSRTRPFTSRSRSVSLSNTCSTIDGF-DSSTVVLGYTGPLRAQRRPPL-VQMSGPLSSTRTPEPLFLLPPPSDSVGISSSQPERYPSFATLEHKKS	5 :
CNGC21 :	MASPKENDDVPML-PISDTSRTRPFTSRSRSVSLSNTCSTIDGF-DSSTVVLGYTGPLRAQRRPPL-VQMSGPLSSTRNPEPLFLLPPPDSVGISSSQPERYPSFATLEHKKS	š :
CNGC20 :	STRDVSSSLSRTRPFTSRSRSVSLANTSSIIDGF-DSSTVVLGYTGPLRTRRPPL-VQMSGPLSSTRSSEPLFLPPPPTSTRDVSSSQPERYPSFTALEHKNS	i :
CNGC22 :	MAPPNEKDDVPML-PISSSSSSSTRSFTSRFRSTSLANTSSAIDGF-DSSNVVLGYTGPLQTYGRPAF-VQMSASLPSTLIPEPLFLHPTPTGG-SSHSIGVSSSQPESCP-FAALEHKNS	: :
a031529 :	MAPPNENDDALKL-FVLDTSSSSTRPFTFRSRNVSLPNTSSTSEGL-DSSTVVLRYTDPHRTQRPPPS-VQMNGPLFSTSSPEPLILLPPPSTGGSSDFVGVSSSQPERYPSFAALEHDNS	
a001676 :	MASPMENDDVPML-PASDTSSSSTMPFTSRSRSTSLANNSSTIDVF-NSSTVVLGYTDPLGTQRRPPL-VQMSYPLSSTRSPEPRFALPPPSTGASYDSVGASSSQPNER	: :
CNGC18 :	MASPMENDDVPML-PASDTSSSSTMPFTSRSRSTSLANNSSTIDVF-NSSTVVLGYTNHLGTQRRPPL-VQMSDPLSSTRSPEPRFALPPPSTGASSDSVGASSSQPNER	: :
a001678 :	MASSNGYDDVPML-PVSCTSSSSTRPFTSRSRSVSLSNTSSTIDVFENSSTVVLGYTDPLGTQRQPQL-VQMGDPISSTRNLELV	. :
CNGC19 :	MASSNGYDDVFML-FVSCTSSSSTRFFTFRSRSVSLSNTSSTIDVFENSSTVVLSYTDPLGTQRQFQL-VQMGDFISSTRNLELVSKHAHFYGTTCFSDYNREAAQIFTFR	. :
a021265 :	MTSPNENDQVSIPEATSRAHTRAFNFKNRSVSLSNSTYYIDGC-DNSKVALGYTVPIRTQRRPPGPLYSTPRPESHFPPSIEPPDSSS-TVDVRSED	
CNGC24 :	MISPNENDQVSIPEATSRAHTGAFNFKNRSVSLSNSTYYIDGC-DKSKVALGYTVPIRTQRRPPGPLYSTLRPESLLPPSIEPPDSSS-TVDVRSED	
a022232 :	MASPNEKDEFFILLFVPEARSRANTRAFNSRNRSVSFSNSTYSTNRV-DNSSVVLGYTGFLRTQRRLFPSVQMSGFLYSTRRP-DQSFFPPSPVQPPDSSS-TVDVPSEE	
	MASPNEKDEFFILLFVSEARPRANTRALNSRNRSVSFSNSTYSTNRV-DNSSVVLGYTGPLRTQRRPPPSVQMSSFLYSTRRP-DQSFFPPSPVQPPDSSLSSS-TVDVPSEE	÷ .
a022233 :	SGPRRTQSRPFSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	
	SGERRIQSRESETIOTRESETIONS AND	
a029958 :	SGPRRIQSRPSPSVnMSGPLIDIRRPPLQSFPPSPVQPPESSLSSIIVDIPSE	1
1029958 : CNGC23 :	SSAALLGIAGSLFSQKPPLFP-MIGELSSSIRK	
B022702 :		
CNGC15 :		•
	MATEQEFTRASRVSRASSSIGYSDEDYTTDEEENEEEEMEELE-EAEEEEEETHVGGTCGIRRRNGSSSSYNKWMV	•
CNGC16 :	MEEQE-EEEEEEETHVGVTCGIRRRNGSSSSYNKWMMASRVSRASSSIGYYSDEDYTTEEEEDEEEE MEEQE-EEEEEEETHVGVTCGIRRRNGSSSSYNKWMMASRVSRASSSIGYYSDEDYTTEEEEDEEEEMEEQE-EEEEEEETHVGVTCGIRRR-	÷ •

		160	*	180	*	200			20	* _	240		*	260		*	280	*	30	
a004537 :																			LEFFIPV	
NGC2 :												IQNWNKIF		ALA					LFFFIPV	
34281 :													LL <mark>V</mark> CVV	ALG					LFLFIPV	
NGC3 :													LLVCVV	AIG					LFLFIPV.	
003323 :													PIVSAV	DIGGVT	VARNDDDF	TNNVPDS	SIFESNYAN	CYHQATVDE	LFFFIPV.	
031515 :												IV	LLVCLV	ALA				^{11D} :	LFIPV.	
000937 :										KKNI	INFQGSF	IQNWNKIF	LFASVI	ALA				^{11D} :	LFFYIPI	
NGC1 :														ALA					LFFYIPI	
022632 :												I <mark>QRWNKIF</mark>	_	AVS					LFFYVPV	
003081 :												IQKWNKIF	_	AVS					LFFYVPV	
020402 :												LFCNKLF		SVF					FFFYLPV.	
NGC7 :												llfCNKLF		SVE					FFFYLPV:	
024067 :										ERKI	FDFQDKF	LLCNKLF	VTSCIL	AVS					LFLYLPF:	
NGC6 :										EKKI	FDFQDKF	LLCNKLF	VISCIL	AVS					LFLYLPF:	
039221 :												ILLCNKLF						VDP	LFLFLPF	1
NGC4 :												ILLCNKLF		-					LFLFLPF	
032132 :											~	LLCNKLF		-					LFLYLPF:	
NGC5 :										- LIVINI		LLCNKLF							LFLYLPF:	
026086 :											FDFQDKT	LIWNRML	VISCIL	AVS					LFFYLPI	
NGC8 :																			LFFYLPI	
008733 :										** X **		VTYWNHVF							FYFYAPY	
NGC13 :										•• ×		VTYWNHVF		_					FYFYAPY	
018089 :												ITRWNHIF	_						LYFYPPI	
NGC14 :										D11		ITRWNHIF							LYFYLPI	
011186 :												VLKWNWVF		_					LYFFVPA	
NGC10 :												VLKWNWVF	- - -	ALF					LYFFVPA	
007839 :												VLQWNRVF		ALY					LEFFLSS	
NGC12 :										RDKI	LDEGGDV	VLQWNRVF	LFWCLV	ALY					LEFFLSS	
a032081 :										RDKI	LDEGGDV	VLQWNRVF		ALY					LEFFLYS	
CNGC11 :													LFWCLV	ALY					LEFFLYS	
a011963 :											L D P R G Q T		LIACLV	SUF					LEFELPV	
:NGC9										KNKI	LDERGQT	IRRWNKLF	LIACLV	SUF					LFFFLPV	
		FVLKHANLLRSGQLO								NRYLPGI	MNPHSKF	VQSWTRFF	ALSCII	AIF					LFFFLIL	
		FVLKHANLLRSGQLO							ARRFATTA	NRYLPGI	MNPHSKF	VQSWTKFF	ALSCIL	AIF					LEFFLIF	
CNGC20 :	EEE	FVLKHAHLLRSGQLG	SMCNDFYCT	CPSYYNRK	AAQIPTSRVS.	AIFDS	TFH	DAKGW	ARRFATSI	NRHLPGI	MNPHSKF	VQSWTRFF	AFSCLL	AIF					LEFFLIL	
NGC22 :	DDE	LGLGSGOLE	EVCNDFYCT	CPSYYNPK	PAQIPPS ADQVPTSRVP	ATEVO	KLHHA	AMCDDARGW ALYEDAKAR	ATREVISI		INF <mark>HYKF</mark>		ASWI						L <mark>FLFLI</mark> K LFVFLTL	
001676 .	NHA		SVCNDFICI.		AAQSRTPRVE							VOLWTTFF	VISCIC	STR.					LEFYPIE:	
NGC18 :	NHA	•		ISKK	DTDDVF	ATSDE		ALDDDAKGW	A		IYESNF	~	ALSCIC	STR.					LEFYPIE:	
001678 :		,			KIEKVE	AIJDI	HNI	ABDDDAKGW	APPEVTSV		MEEDSKE	· · · · · · · · · · · · · · · · · · ·	AFSCIT	STR					LEFFPIO	
NGC19 :						-vsps	MVHNZ	ARDDDAKGW	ARREVISU	DKYLPKI	MEENSKO	VRGWTIFE	AFSCIT	STR					LEFFPIE	~
021265 :	E	-SVLENANILKSGOLO								RRCVPGT	MNEHSKE								TEVELLL	
NGC24 :		-SVVENANILTSGQL										VOVWIRFL							TEVELLL	
022232 :		VVLKNANLLKSGQL0									MNEHSKE	~						IDP		
NGC25 :		VVLKNANLLKSGQLG							AKREASSV	RKLIPGI	MNEHSKE	VOMWIRFL		ATE					AFLFILS	
		CALLKNANLLKSGQLO							AKLFASYV	RRCVPGT	INPHSKF	~		STE				IDP		
		CALLKNANLLKSGOLG		CPSYYNLO	AAOFHTYGVV	SDSRTOVI	ATHNRO	ALHDYDRGW	DKLFASYV			VOMWIRFL		STE				IDP		
		DELLKHAHRLRSGKLO	MCNDPYCT	CPSNYNPK	ASRLPNP-TV	SAST	FHN2	ALYDDARSW	ARREASSV			VOIWTKFF	- 1 11	ATE					LEFEIIL	v
		DELLKHAHRLRSGKLO	MCNDPYCT	CPSNYNPK	ASRLPNP-TV	SAST	FHN2	ALYDDARSW	ARREASSV			~		ATE					LEFFIIL	
																			LELYTLS	
NGC15 :										LGRI	LDERSKI	VOEWNRVE	LLVOAT	GTE				VDP		
003001 .										I.GRI	LDERSKU	VOEWNKVE	LLVOAT	GTF					LELYTIS	
NGC16 ·										LGRT	LDERSKI	VOEWNKVE	LLVOAT	GT F					LELYTIS	
008699 .									T	KGPEGEW	LDERSKR	VORWNRAT	LLARG						LEFYALS:	
										CDECE	L D D D C W D	NORWMBAT	LIADOV	AT A					LEFYALS:	

	* 320	* 340	*	360	*	380	* 400	* 420	* 440	*
Bra004537 :	DPDRFCLKLLKKLEAVACVFRT	FI <mark>D</mark> AFYLVHMLFQF	NTGFIAPSS	RGFGRGELV	QSSKKIAVRYL-	-KSYFIIDVLSI	LPIPQ	VVVLA	VVP-SMSRPASLVTK	ELIKWAIFC
1										
Bra034281 :	DSPNECETEDKKLAAVVSATET	FTOTEVVTHITENE	TTEFTAPRS		VHSKATRKRLE-	-FEOFTVDICSV	TPTP0	vvvvT.T	TH-RSDSLVSC	ATWATT
BoCNGC3 .	DSPNECETEDKKLAAVVSATRT	FTOTEVNTHITENE		OVSLEGELT	VHSKATRKRIE-	-FEHETVDICSV			TH-RSDSLVSC	ATTWNTTT
Bra003323 .	DPGRFCIKLIKKLEAVACVFRT DSPNFCFTFIKKLAAVVSAIRT DSPNFCFTFIKKLAAVVSAIRT DSHKFCFTIKKLAAVVSAIRT DSHRFCFTIKKLQVAVCVIRT		TTELWARDS	OASI DO	-NSKDUDKDI F-	FEVESUDIUSV			I S_DROR_TSINGR	ET RWAMEC
DIA003323 .			TTUUTAPRO	ONCEDERT.	-NORFERNALI-	TEVETUDIUCU		•11 • 11 • 11 • 11 • 11 • 11 • 11 • 11	-KUŐV-19149V	ET KWAMPC
Brausisis :	DGKKHOINIHSSLEIAASVLRT	LINIFIGIALIFAT	IIKHIAPKS	QUSPREETT	VISVAISERRL-	-1111101050				
Bra000937 :	DGKKHO N HSSLEIAASVLRI	FVDAFMIIHIVFQF	RIAIVSPLS	RVEGRGELV	EDPKALALKYI-	-SSTELLDVLSL	TETEÖ	LVVLA	/ P-NVDKPVSLLTK	DY IIVIFA
BOCNGC1 :	DGRKHCINIHSSILIAASVIRI DGRKHCINIHSSILIAASVIRI DDAKKCIGLDNKMEITASVIRS DKANNCIDVDKKMQTTASVIRS	FVDAFMIIHIVFQF	RTAYVSFLS	RVFGRGELV	EDPKAIALKYL-	-SSYFIIDVLSI	LPLPQ	LVVLA	/IF-NVERPVSLLTK	DY ITVIFA
Bra022632 :	DDAKKCIGLDNKMEITASVLRS	FTDIFYVIHIIFQF	RTGFIAPSS	RVFGRGVLV	EDTRQIAIRYL-	-SSHFIIDILAV	LPLPQVRIEIEIEIDLV	LSTCISKPLMIVCFPQVVILI	IIP-HMRGSRSLNTK	(NLTKFIVFF
Bra003081 :	DKANNCLDVDKKMQTTASVLRS	VTDIFYAIHMVFQF	RTGFIAPSS	RVFGRGVLV	EDRRKIAKRYL-	-SSHFIIDILAV	LPLP	QMVI <mark>SI</mark>	IIP-RMREPKTLHTK	(NM_KFIVFF
Bra020402 :	DGESKCIGIDRKLAITATTFRT	FI <mark>D</mark> VFYLAHMALQL	RTAYIAPSS	RVFGRGELV	IDPAQIAKRYL-	-QRWFIIDFLSV	LPVPQ	IVVWR	IQ-SSRGSDVLATK	QALLFIVIV
BoCNGC7 :	DGESKCIGIDRKLAITATTFRT NGESKCIGIDRKLAITATTFRT	FIDVFYLAHMALQL		RVFGRGELV	IDPAQIAKRYL-	-QRWFIIDFLSV	LPVPQ	IVVWR	JQ-RSRGSDVLATK	QALLFIVIV
Bra024067 :	NDSGKCIGIDRRLATIATILRT NDSGKCIGIDRRLATIATILRT	FINVFYLFRMALQF		RVFGRGELV	IDPAQIAKRYL-	-QQYFIVDFLSV	LPLPQ	IVVWR	FLY-TSTGGSVLETK	QATRSIIV
BOCNGC6 :	NDSGKCIGIDRRLATIATTLRT	FIDVFYLFRMALOF		RVFGRGELV	IDFACIAKRYL-	-OOYFIVDFLSV	LPLPO	IVVWR	TIY-TSTGGSVLETK	CATRSITV
Bra039221 :	NDKAKCVGIDRKLAIVTTTLRT NDKAKCVGIDRKLAIVTTTLRT	VTDSEVLEHMALRE		RVEGRGELV	TDPACTAKRYL-	-OOYETTDULSV	T. PV PO	TTVWR	TY-SSRGANVLATE	CAL BYTYLY
BoCNGC4	NDKAKONGTOPKTATUTTTER	VTOSEVIEHNALDE			TDPACTARPYL-	-OOVETTDULSV		TTWP	TY-SSPGANVLATE	ONTRYTYTY
Bra022122 .	NDK ARCTOTERIATVITIER	VIDSEVIEW ADDE	PTAYWARSS	DURCRORIU	TDERCTARENT	-DOVETTELLSV		TTUND	V_TSECANULATE	
BIAUGZIGZ .	NDKAKCIGIDRKLAIVATTIRT NDKAKCIGIDRKLAIVATTIRT	VINCENTED ANDE	DTAVUADOS	DUECDORIU	TDERQUERRIL	OOVETTELSV		TTUMP	TORONWINT ATK	10 AUDVILLU
BOCNGCS :	DNSGSSCIGIDTKLAVTTTTLRT	VI SPALPROA RE	RIAIVAP55	RVEGRGELV	IDPAQIEARIL-	-00111111120			III-ISKGANVLAIK	QA RIIV V
Bra026086 :	DNSGSSCIGIDTKLAVTTTLRT DNSGSSCIGIDTKLAVTTTLRT GG-PACISVDVGLAATVTFFRS QAG-TACMSIDIGFGLLVTFFRS QAG-TACMSIDIGFGLLVTFFRT GGNKD-YFCAKTDTNLRILVTFFRT KNTGR-SSCMTTDLKLGIVTFFRT KNTGR-SSCMTTDLKLGIVVTFFRT	ILDVFALTRAALQF	RTAYLAPSS	RVEGRGELV	IDPAKLAQRYL-	-TRYFIVDFLAV	ThThď	IAVWK	H-GSKGMDVLPTK	TA LNIVIT
BOCNGC8 :	DNSGSSCHGUDTKLAVTTTTLRT	ILOVFALTRANQF	RTAYLAPSS	RVEGRGELV	IDPAKIAQRYL-	-TRYFIVDFLAV	LPLPQ	IAVWK	TH-GSKGMDVLPTK	TALINIVIT
Bra008733 :	GG-PACISVDVGLAATVTFFRS	VADLFHLLHIFMKF	RTAFVARSS	RVFGRGELV	RDPREIAMKYL-	-KSDFIVDVAAM	LPLPQ	IVIWL	/IP-AATNGTANHAN	ISTIALIVIV
BoCNGC13 :	GG-PACISVDVGLAATVTFFRS	VA <mark>DLFHLLHIFMKF</mark>	RTAFVARSS	RVFGRGELV	RDPREIAMKYL-	-KSDFIVDVAAM	LPLPQ	LVIWL	/IP-AATNGTANHAN	ISTIALIVIV
Bra018089 :	QAG-TACMSIDIGFGILVTFFRT	LA <mark>D</mark> FSFLIHILIKF		RVFGRGELV	IDRREIAIRYL-	-KSEFIIDLAAT	LPLPQ	IMI <mark>WF</mark>	IPNAGEFRYAAHQN	HT SLVVII
BoCNGC14 :	QAG-TACMSIDIGFGILVTFFRT	LA <mark>D</mark> FSFLIHILIKF		RVFGRGELV	MDRREIAIRYL-	-KSEFIIDLAAT	LPLPQ	IMIWF	VIPNAGEFRYAAHQN	IHTI SLVVI I
Bra011186 :	GGNKD-YFCAKTDTNLRILVTFFRT	IACLEVILHIFIKE		T-RVEGRGELV	MDPKAIAWRYL-	-KSDFIIDLVAT	LPLPO	IVIWF	MP-ATRSYRFDHSN	ND ALIVIL
BoCNGC10 :	GGNKD-YPCAKTDTNLRTLVTFFRT	TADLEYLLHIETKE	BTGETAPNS	ST-RVEGRGELVI	MDPKATAWRYL-	-KSDETTDLVAT	T. PT. PO	TVTWF	MP-ATRSYREDHSN	INDUAT.TVIT.
Bra007839 .	KNTCR-SSCHTTDLKLCTVTTEERT			PWEGPGETW	TYPRT TAPPYT -	-RSDETVDI TAC		TVSWF	T P_STRSSHSDHTT	MAT VT TVTV
BecNCC12 :	KNTCD-SSCATTDI KICIVUTEEDT		DTAVUEDTS	PURCPORTY		-RSDI TVDI TAC		TUSWE	T D_STDSSUSDUTT	MALUT TUTU
BuchdC12 .	KRTGR-SSCMTTLLNLGIVVTFFRT		DTAVUCDTS	DUECDORIU	KOPKLINNKIL-	DOD TUDI TAC		IVONT.	TID STRESHODUTT	
Brauszusi :	KRIGR-SSONII LNIGIVVIFFRI.	LA LFIVLHIVIKF	RIAIVSKIS	KVEGRGELV	KUPKLIARKIL-	-RSDFIVULIAC	LPLPQ	IVSWF.		NA VLIV V
BOCNGC11 :	KRIGR-SSCHITILNLGIVVIFFRI RK-EACITIGIRLEVVLTVIRS	LADLEYVLHIVIKE	RIAYVSRIS	RVEGRGELV	KDPKLIARRYL-	-RSDFIVDLIAC	ThThď	IVSWF.	I-P-SIRSSHSDHIT	NA VLIV V
Bra011963 :	RK-EACHTHGIRLEVVLTVIRS	LADAFYIAQUVURF	RTAYLAPSS	RVEGRGELV	IDSRKIAWRYL-	-NKSEWIHIVAA	LPLPQ	<u>MTI</u> MI	/TE-NLRGSPMTNTK	NTURFILLE
BoCNGC9 :	RK-EACITIGIRLEVVLTVIRS KQNDKCIVITWFMAKAFVAVRS	LADAFYIAQIVIRF	RTAYIAPSS	RVEGRGELV	IDSRKIAWRYL-	-NKSFWIHIVAA	LPLPQ	VLIWI	/IP-NLRGSPMTNTK	(NTIRFIIIF
Bra021266 :	KQNDKCIVIDWPMAKAFVAVRS	VT <mark>DILESVNILLQF</mark>		TVVGAGQLV	AHPRKIARHYF-	-RGKFLLDLFIV	MPLPQ	ILI <mark>LW</mark>	IIPAHLGASGANYAK	(NLI RAAVI F
BoCNGC21 :	KQNDKCIMICWPMAKAFVAVRS	VTDILFSVNILLQF		TVVGAGQLV	AHPRKIARHYF-	-RGKFLLDLFIV	MPLPQ	ILI <mark>LW</mark>	IIPAHLGASGANYAK	(NLI RAAVI F
BoCNGC20 :	KONNNOMENDWFMAHTFVAMEN	VT VLISVNILIOE	BLAYVAPDS		DHPRK SHAF-	-RGKIGLINN FIN	MEINEQ	IIIIIILW	PAHLAISGANYAK	KNL RAAM F
BoCNGC22 :	KENDKCIMILWPVAKAFIAVRS	VTDVLFFVNIMLQF		TVVGVGHLF	DHPRKIARNYL-	-RVKFLLDIFIV	MPLPQ	IWIFW	I PVQLGASGDNYAK	NFI TAAVI F
Bra031529 :	KENDKCIMILWFVAKAFIAVRS KQNNKCIVILWFMAKAFIIVRS YKEERCIKILWWITNVFVIVRT YKEERCIKILWWITNVFVIVRS	VTEALSVNILIGF		MVVEVTWIN	DHFVKIZRHYF-	-QGNEFLDIFIV	MPLPQ	SW	ITFAWLGGSWENNAY	INVAAQUIEL
Bra001676 :	YKEERCIKIDWWTTNVFVIVRT	ITEGLYALNIVLOF		TVAGAGOLV	DDPKKIASHYL-	-RGKFLTDFFIV	LPIPQ	ILLLW	I POLLGTSGANNTF	KNYTRAAIIV
BoCNGC18 :	YKEEROIKIDWWTTNVEVIVRS	ITEGLYALNUVLOF	BLAYVDLES	TVVGAGOLV	DDEKKIASHYL-	-RGKELTDEEIV	LPIPO	TLLLW	I POLLGTSGANNTE	KNYL RAATI V
Bra001678 :	SESGKCURTDEKMARVLVALES	LTDELYEVNTLLOC		TVVCSGOLV	KGSVETAKRYY-	-RGNETTDEVTV	TPL.PO	TT.T.W	TTPHVLVTYGANTTE	KNLICTAVVV
BoCNGC19 :	YKEERCIKIIWWTTNVFVIVRS SESGKCIRIDEKMARVLVALRS SQSGKCIRIDEDMAIVLVALRS									
BOCNGC15 .	RHDNKCIEIDWPKTTVLVSLRS		TRANSTOTES	D TUC A COT V	DUDDUTADNAT	DCREETDIETU	TRIDO	TNTT	TIDAULCTETACEEL	NTEDSTREET
BLAUZIZOS :	RHDNKCIEIDWTKTTVLVSLRS		TRMAT VAPES	DIVGACOLV.	DUPRNICKNIL-	DCMUEUDUET		IMILS	TI DAVI CTOTACTO	NITTO CATE
BOUNGC24 :	REDIKOLLIWIKTIVLVSLRS	MINLINFINIL Q	-FRMAIVAPES	KINGAGQLV	DUBERKUMENUT-	-KGKEPTIV	LPIPQ	noTLS	PARLGISTAGFER	ANTIKSTEIV
Bra022232 :	RQDNKCIEFDWPKTKVFVSIRS RQDNKCIEFDWPKTKVFVSIRT	MSULIFFMNILIQ	-FRLAYVAPES	RIVEAGQLV	DHFRKIASNYL-	-KGKFILDULIV	LPMPQ	IMILS	MIFAHLGTPRSELEK	ANT RIVE F
BoCNGC25 :	RQDNKCTEIDWPKTKVFVSLRT RDDNKCTDIDWPKATIFIFIRS DNKCTDIDWPKATIFAFLRS QKNNKCTVIDWPIATAFVIVRT QKNNKCVVIDWPIATAFVIFRT NDACMCILVIGWIALTVTAIRS NDACMCILVIGWIALTVTAIRS NDACMCILVIGWIALSITAVRS NDACMCILVIGWIALSITAVRS GRT-TGPPCIVMDGAFAAVVTVWT	MSULIFFINILIQ	-FRLAYVAPES	RIVGAGQLV	DHPRKIASKYF-	-RGKEFIDILIV	VPMPQ	IMILS	MUPAHLGTPRSELEF	XNITRIVF F
Bra022233 :	RDDNKCTDIDWPKATLFLFLRS	MSEFIFFINILLQ	-FRLAYVAPES	RIVGAGQLV	DHFRKIACNYL-	-RGKFFLDVVIV	YPVPQ	IMILS	ITPKSEFEF	INATIGIE F
BoCNGC26 :	DNKCTDIDWPKATIFAFLRS	MSEFIFFINILIQ	-FRLAYVAPES	RIVGAGQLV	DHPRKIACNYL-	-RGKFFLDLLIV	YPVPQ	IMIFS	IIPKSEFEF	LNTVIALFIF
Bra029958 :	QKNNKCIVIDWFIATAFVIVRT	LT <mark>I</mark> VIFFANMLIQ	-FRLAYVARES	TVVGAGQLV				LVLS	VIPAQLAISGTNYAF	KNLIRTGIIV
BoCNGC23 :	QKNNKCVVIDWPIATAFVIFRT	LTEVIFFANMLLOAPV	PERLAYVARES	TVVGAGOLV	DRPKKIALHYF-	-RGYFIVDLIIV	MPEPQ	VLVLS	VIPAQLAISGTNYAF	KNLIRAGIV
Bra022702	NDACMCI LVDGWLALTVTALRS	MTELLHIWN LIGERT	ARWWEYRGGDS	GDINKEDETRW	RMRGAPPYVK	KNG-FFFDIFVT	LPLPC		VIPSLLKRGSVTLV	VSTILLTEIF
BoCNGC15	NDACMOLTWICHTATTVTATES	VTTLEHIWNTETOFET	ARBWPYPSGDS	GDINKEDETPW	RTRVA PPVVV	KNG-REEDIEVT	L.PL.PO		VIESLIKEGSVTIV	STILLTER
Bra002001 -	NDACMOLUMECHTAT STRANDS	MTRITHUM WINDERT	ADENDADCODE	COTNREPETO	DT CDDWA DDAWN	KKCT FFDI FVT			UDSTINCSVILV	USVITUTE:
Brauusuur :	N DACHELLINGWLALDITAVKS	MTRI I HI MANAGERI	ADDWD PGGDS	CDTNNEDEIKI.	DTORROPPIVK	NUCT SEED FUT		V1WV	VIESTINGSVILVV	
BOUNGUIG :	NDACMOLLY GWLALTITAVRS	MINITER MANAGERI	AREWPYPGGDS	JGDINKEDLTRI.	RIDKKVEPPYVK	KKGIFFF FVI	TETEO	VUUV	VIPSLIKKGSVILVV	/SVILVIE F
BACNCC17 .	GRT-TGPACH YMDGAFAAVVTVVRT	CLEALHEWHWWWOFRL	AYVSRES	INVECEKIV	WDFRALSHAR	SLTGEWEDVIVI	TEAEd	Avfwl	MMEKLIREEKVKLIM	AT DULLIF F

	460	* 480	*	500	*	520	*	540	* 560	*	580	*	600	
Bra004537			LFLYMLASHVFG	SEWYLISIER	KDR <mark>C</mark> WRE1		EGCVHGN		NSQYLIGSCPLMDP	EEIKN-STV	NFCIFAEA	IQSGVVES	MNEPKKE	: 343
BoCNGC2	: QYVPRIARIYPLFKEVT	RTSCLVTETAWAGAALN	l fl ymlashv <mark>f</mark> g	SFWYLISIER	KDR <mark>CWRE</mark> 1	ICAKI	KGCIHAY	YCSGGED	NSQYLIGSCPLMDF	EEIKN-STV	NFGIFAEA	IQSGVVES	MDFPKKF	: 343
Bra034281								-	NGRYLNTTCPLIDF	~				: 296
BoCNGC3				AFWYV <mark>SS</mark> VE <mark>R</mark> I	KNK <mark>C</mark> WRLI	ECAKI			NGRYLNTTCPLIDF	~	NFGMYTDA	IRSGIVES	KPRDFPRKF	: 296
Bra003323	: QSIPRSIRIYPIYKNGT	KLYCRVAVIKWVGAALN	IFFYLIPSHVIG	AIWYLSAVERI	KET <mark>CWRE</mark> Z	ACAKI			NSRFLNTSCPLIDF	EQITN-STVI	INFGIYTDA	IKSGVVET	RDFPRKL	: 338
Bra031515	:		QVFG	AFWYLSAIER	KNRCWSD	ACAKS			NSHFLKISCPLIDP	GEITN-STV	NFGMYIDA	IKSGVVES-	RDFPRKF	: 200
Bra000937	: QYIPRILRIYPLYSEVT	RTSCIVTETAWAGAAWN	LSLYMLASHVFG	ALWYLISVER	EDRCWRE/	ACGKR			INDYLTTSCPFINF			IKSGIVKS		: 349
BoCNGC1		RTSGIVTETAWAGAAWN		ALWYLISVER	EDROWREZ	ACEKR	· ·		INDYLTTSCPFINF			KSGIVES-		: 350
Bra022632		RTSCILTETAWAGAAFN RTSCILTETAWAGAAFN		AFWILFSIER	ETVOWKQ/	AUNRAG	KNICDIIS	ICDHKAA-G	GNAFLNASCPVQTP	N-AIL		~		: 378 : 383
Bra003081 Bra020402		RIGCILIELAWAGAAFN RTACVFAETAWAGAAYY		AFWILFSIER	NDAGWORI	AWNRAG	KKICTTGF	YCGNONMDG.	NNIFLNGSCFVLKF	DD_NDD	DECIVICA		~	: 398
BIA020402 BoCNGC7		RTAGVFAETAWAGAAYY		AFWYLLALFR		ACSDAG	KKICTTGF	YOGNONMDG-	-YDVWNKTKESVLOSKCRAFLD	DP-NPP	DEGITION		~	: 370
Bra024067	OYIPREIRTYPI SKELK	RTACVFAETAVAGAAYY	LLYMLASHIVG	ALWYLLALER	VNGCWRK	ACLVDG	ONCTRNF	FOGNENMDG	-YAAWNTIKESVLOKSCPVNVT	DGD-NPP		ISSGIVSS		: 361
BoCNGC6	OYIPRFFRIYPISKELK	RTAGVFAETAWAGAAYY	LLYMLASHIVG		VNGCWKR		ONCTRNY	FOGNENMDG	-YAAWNTIKESVLOKSCPVNVT	DGD-NPP				: 387
Bra039221		RTAGVFAETAWAGAAYY					DNCTRNFI	FCGNQNMKG	-YDAWDDVKDPFLQLRCPVNVT	EGE-EPP				: 372
BoCNGC4	: QYIPRFLRMYPLSSELK	RTAGVFAETAWAGAAYY	L <mark>LL</mark> YMLA <mark>S</mark> HIVG	ALWYLLALER	NNDCWSK	ACKDN	DNCTRNF	FCGNQNMKG-	-YDAWDDVKDPFLQLRCPVNVT	DGE-EPP	DFGIYLRA	ISSGIVSS	KKFVSKY	: 372
Bra032132	: QYIPRFVRMYPLSSELK	RTAGVFAETAWAGAAYY	l <mark>ll</mark> ymla shiv g	ALWYILALE <mark>R</mark> I	NND <mark>C</mark> WSKI	AC <mark>VKK</mark>	DNCTRNF	FCGNQNMEG-	-YAAWYTAKSSVLQEMCPVNVT	EGE-EPPI	DFGIYSRA	ISSGIVSS	KKFVSKY	: 382
BoCNGC5	: QYIPRFLRMYPLSSELK	RTAGVFAETAWAGAAYY	L <mark>LL</mark> YMLA <mark>S</mark> HIVG	ALWYLLALER	NND <mark>C</mark> WSK/	AC <mark>VKK</mark>	BNCTRNFI	FCGNQNMEG-	-YAAWYTAKSSVLQEKCPVNVT	EGE-EPP	DFGIYSRA	ISSGIVSS-	KKFVSKY	: 382
Bra026086	: QYIPRFVRFIPLTSELK			AFWYMLSVER			DFKLCVQ II	LYCGTKFVSSI	RETEWIKTVPELLKSNCSAKAD	DAK	NYGIYGQA	ISSGIVSS		: 341
BoCNGC8	: QYIPRFVRFIPLTSELK								RETEWIKTVPELLKSNCSAKAD		NYGIYGQA	ISSGIVSS		: 370
Bra008733									ERQYWQNVTQVLSHC		TKFGMFAEA	~		: 318
BoCNGC13	· · · · · ·	KTTGFIAKTAWAGAAYN						DCK-SLQQP	ERQYWQNVTQVLSHC	DATSS-TTN	REGNEADA	FTTQVATI		: 317
Bra018089 BoCNGC14		KATGVAAKTAN SGAAYN KATGVAAKTAN SGAAYN					THSPSCNLLFI	DCG-SLRDP	GRQAWMRIIRVLSNC	DARNDDDDQH	QFGBFGDA	FINDVISS		: 327 : 327
Bra011186		KATGVVIKTAWAGAAYN			~				RQQQWANVTNVFKLC	DAR-KGE	WYCMPEN?			: 354
BoCNGC10		KATGVVTKTAWAGAAYN		AAWYILSED	YTSOWKT	RONKEH	-GGVNCYLYY	DCDSPLYDA-	ROCOWANVTNVFKLC	DAR-KGE	KYCMFEN2	TKKVVSS		: 354
Bra007839		KATGVVTTTAWAGAAYN		AAWYLLSIER	QATCWKAI	ECHNEL	-GPIRCVTDFI	FDCG-TVNRE-	DRNNWQNVTVVFSNC	DPSNKIR	TFGIFADA	ITKNVVSS		: 355
BoCNGC12	: QYIPRLYLIFPLSAEII	KATGVVTTTAWAGAAYN	LLQYMLASHILG	AAWYLLSIER	OATCWKAI	CHNEL	-GPIRCVTDFI	FDCG-TVNRE-	DRNNWQNVTVVFSNC	DPSNKIR	TFGIFADA	TKNVVSS	PFLEKY	: 355
Bra032081	: QYIPRLYLIFPLSAEII	KATGVVTTTAWAGAAYN	L <mark>LQ</mark> YMLASHILG	AAWYLLSIQR	QAT <mark>CWK</mark> AI	ECHKEF	-APLECVTDFI	FDCG-TLHRP-	DRNNWQNITVVFSNC	DPSNDIK	TFGIFADA	ITKNVVSS	PFLEKY	: 351
BoCNGC11	: QYIPRLYLI <mark>F</mark> PL <mark>SAEII</mark>	KATGVVTTTAWAGAAYN	L <mark>LQ</mark> YMLA <mark>S</mark> HILG	AAWYLLSIQR	QAT <mark>C</mark> WKAI	ECHKEF	-APLECVTDFI	FDCG-TLHRP-	DRNNWQNITVVFSNC	DPSNDIK	TFGIFADA	ITKNVVSS-	PFLEKY	: 351
Bra011963		KATGVVTETAWAGAAYN		ACWYLLAVER	~				QRNSWFEWSNITTIC		(EFGIYGDA)	VTSTVTSS		: 347
BoCNGC9	: QYVPRMFLIFPLSRQII								QRNSWFEWSNITTIC			VISTVIS		: 347
Bra021266	: QYIPKLYRLLPILAGQT								RGESSEAFAAWKGNAS			MNLTNHTS-		: 459
BoCNGC21	: OYIPKLYRLLPLLAGOT								RGDSSEAFAAWKGNAS HGETSALSAAWKDNAG			WNLISHIS.		: 458 : 452
BoCNGC20 BoCNGC22	: OYIPKLCRLLPLLAGKT								HGNSHVAAWKDNAS		FYGIYLKA	WNLTNHSS		: 446
Bra031529		-PIGFILESSSK-FAIN							RGSSDVVLAALKYNTS			MNLTNOSS		: 465
Bra001676	OYIPKLRRLFPLLAGOT								RENRTEVLHAWKINVS			VNLTSNRT		: 421
BoCNGC18	OYIPKLRRLFPLLAGOT				~		~		RENRTEVLHAWKINVS	~		VNLTSNCT		: 415
Bra001678	: CIPKLHRLFHLLARKR	-TTGFIFESAWASFFIN	L <mark>FT</mark> YILA <mark>G</mark> HIVG	SCWYLFGLOR	VNRCLRET	CGDHM	-ESKCHGVCKEL	IDCGLRLKEK-	-LIDCERRNTTVTQAVLNWNVI	AAACFQENG	PYGIYWKA	VNLTHDSN	LPKKY	: 396
BoCNGC19	:			R	VNR <mark>CLRE</mark> I	CEDHM	-ELKCHGVCKEL	IDCGLHLKEK-	-LIDCERRNTTVTQAVLNWNVI	AAACFQENG	RYGIYWKA	NLTHDTN	LPEKY	: 299
Bra021265	: QYIPKLYRLLPLLAGQT			SCWYFSGIER	VKK <mark>C</mark> IIY				NIYASASLRARWRDSDS			VNLTSHSS		: 442
BoCNGC24	: QYIPKLYRLLPLLAGQT			SCWYFSGIER	VKKCLLY				NMYASASLRALWRDSDS			VNLTSHSS		: 442
Bra022232	: QYIPKLYRLLPILAGQT	-PTGFIFESAWANFIIN	LLTFILAGHAIG	SFWYIAGLOR	VKKCLLH				VNYARESQIALWRDSES VNYARESQIALWRESES	~		WNLTTOPN		: 455
BoCNGC25 Bra022233	• OVIERLIELEGOI	-PICFIFESAWANFIIN - DTOFIFESAWANFIIN	LLIFILAGHAIG	SEWYLAGLOR	VKKCLLH	AG-N		DOARG	VNIARESQIALWRESES	VNACEQEGG	ISFGLILKA ISFCININA	ANITTOPN	IFTRF IFTRF	: 458
BoCNGC26	: OYIPKLYRLLPLIAGOT	-PTGFIFESANSNFIIN	LLTFTLAGHAVG	SEWYLAGLOB	VKKCLLO	AG-N	FTMDERRYT	DOTSG	DSNLRALWRDSES	VNACEQESC	SECTILINA	ANLTTEPN		: 444
Bra020058	· OVTERLYPITELLACOT.	- PTCT TEESADANEVIN	TTTENTACHWAG	SOWYTEGLOR	VNOCT BN	AC-C	HSGRECRGT	TDCCHC	NSNTSASLPATWPNSAS	ANACEOFIC	SVOTVLKM	WNLTTHTS	TTTPY	· 401
BoCNGC23	. QYIPKLYRLLPLLAGQT	-PTGLIFESAWANFVIN	LLTFMLAGHVVG	SCWYLFGLOR	VNQCLRN	AC-G	HSGRECRGL	DCGHG	NSNISASLRAIWRNSAS	ANACFGEDG	SYGIYLKM	WNLTTHTS	LLTRY	: 459
Bra022702	: QYLPKIYHSIRHLRQNA	TLSGYIFGTVWWGFALN	M VAYFVA<mark>AH</mark>AA G	ACWYLLGVQR	SAKCLKE	CENTMG-	-CDLRMLSCKEP	YYGTTEMVL	DRARLAWARNHQAF	SVCLDIDTD	TYGAYQWT	IQLVSNES	RLENV	: 367
BoCNGC15	: QYLPKIYHSIRHLRRNA	TLSGYIFGUVWGIALN	MVAYEVAAHAAG	ACWYILGVOR.	SAKCLKE	ENTMG-	CDLRMLSCKEP	YYGTTEMVL-	DRARLAWARNHQAF	SVCLDSDIN	TYCAYOWT	QLVSNES	RLE	: 367
Bra003001	: QYLPKIYHSVRHLRQNA	ILSCYIFG VWGIALN	MIAYFVAAHAAG	ACWYLLGVOR	SAKCLTE	ESTMG-	CDLRMLSCKEP	YYGTTEMVL	DRARLAWAQNNQAF	SICLDINTN	TYCAYKWT	QLVSNES	RLEKI	: 370
BoCNGC16	QYLFKIYHSVRHLRQNA	ILSCYIFGIVNWGIALN	MIAYFVAAHAAG	ACWYLLGVOR	SAKCLKE	CESTMG-	-CDLRMLSCKEP	YYGTTEMVL	DRARLAWAQNNQAF	SICLDINTN	TYGAYKWT	IQLVSNES	RLENI	: 370
BraUU8699	OF DEVELOPMENT OF DEVELOPMENT	KVIGYIFGUIWWGFALN	LIATPIASHVAG	GOWYVLAIOR	VASCIRQ	COMRTAN-	-CNL-SLSCQEE	CYQEVSESS-	TIGFPCVSGNLTSVVKK TIGFPCLSGNLTSVVKK	PMCLDSDGP	IRIGIIIGWA	I PVISSNS-	LAVISI	: 394
BOCNGCI/	q p p	d M MILLILGUTWMCLUTW	a h g		C C		-CMT-STSCAED	CIQEVSPIS-	IIGLECTOONTIOAAK	ENCTONCE	5G 5 a		TAAM I	. 333
	- F F		y		-	-		-						

*	620 * 640	* 660	* 680	* 700	* 720 * 740 *
Bra004537 : FYCFW		WGLRNLSAVGQNLKTSDFEGEII	FAIIICISGLVLFALLI	IGNMOKYLOSTT	BIEBMRVKRRDAEQWMSHRMLEDDLRKRVR : 430
		WGLRNLSALGQNLKTSAFEGEII	F <mark>AVIICIS</mark> GLVLFALLI	CNINO TANT O PTT	UDURDNRUZDDRAR ONUCUDNI DDRI DVDVA 434
braddiroi . iPorn		WGLRNISALGQNLKTSNSVGDIV	FALIICVSGLLLFAVL	IGNIQ <mark>K</mark> YLQ STT	IRLDDMEEKKRDTDKWMSNRMLPEYLWERIR : 383
BoCNGC3 : FYCFW		WGLRNISALGQNLKTSNSVGDIV	F <mark>ALIICVS</mark> GLLLFAVLI	IGNIQ <mark>K</mark> YLQ STT	IRLDEMERKRETEKKEIDEKKINSERHLFELLERKVR : 430 IRLDEMEEKKRETEKWESNRMLFEYLKERIR : 383 IRLDEMEEKKRETEKWESNRMLFEYLKERIR : 383 IRVDEWEAKKRETEQWESEDLFDDIEKCI- : 424
Bra003323 : LYCFW		WGLRNISALGQNLKTSNSAGDVF		IGNVQ <mark>K</mark> YLQ STS	IRVDBWEAKKRDTEQWMPSEDLFDDLEKC <mark>I</mark> - : 424
DIGUSISIS . INCIN		WGLRNLSALGQNLETSNSVGEIF	FAITICVSGLLLFSVLI	IGNVQKYLQSTI	SIRER : 287
BIA000337 . FICEM		WGLRNLSALGQNLNTSKFVGEII			VREEDMRVRKRIAEQWWAHRMLPEDLRKRIR : 436 VREEDMRVRKRIAEQWWAHRMLPEDLRKRIR : 437
BOCHGOI . INCIN		WGLRNLSALGQNLNTSKFVGDII WGLQNLSSLGQNLKTSTYIWDIC	FAVEICISGLVLFALL	IGNMQKYLESTT	VREEDMRVRKRIADOWNAHRMLHEDLRKRIR : 437
DIA022032 . FECT		WGLQNLSSLGQNLKISIYIWDIC WGLQNLSSLGQNLKTSTYIWDNC	FAVEISISGLVLFSEL		TRLEEMRVKRRDAEQWMAHRLLFESLRKRTR : 465 TRLEEMRVKRRDAEQWM <mark>S</mark> HRLLFDNLRKRTR : 470
braddoddi . redru		WGLQNLSSLGQNLKISIIIWBNC WGLQNLSTLGQGLETSTYPLDIM	RAVEISISGLVLESEL.		IRLDOMAVARRIADOWNSHRILPDNIAAIY : 470 IRLDOMAVARRISDQWMHHRMLFQDIRQRVR : 485
		WGLQNLSTLGQGLETSTYPLDIM	ESTTLATSCLIFALL		IRLEEMRVKRRISEQWHHRMLEQDLRQRVR : 455
		WGLQNLSTLGQGLETSTYPGEII	FSIALAVAGLLLFALLI	IGNMOTYLOSLT	IRLEDMRVKRRLSDQWMHHRMLEPDLRERVR : 448
BoCNGC6 : FECLW		WGLQNLSTLGQGLETSTYPGEII	FSIALAVAGLLLFALLI	IGNMOTYLOSLT	IRLEEMRVKRRISEQWMHHRMLFPDLRERVR : 474
Bra039221 : FFCLW		WGLQNLSTLGQGLETSTYPGEVI	F <mark>SIVLAIA</mark> GLLLFALLI	IGNMCTYLOSLT	IRLEDMRVKRRDSEQWMHHRMLFPELRERVR : 459
BoCNGC4 : FFCLW		WGLONLSTLGOGLETSTYPGEVI	F <mark>SIVLAIA</mark> GLLLFALLI	IGNMQ <mark>T</mark> YLQ SLT	IRLEDMRVKRRDSEQWMHHRMLFPELRERVR : 459
Bra032132 : FFCLW		WGLQNLSTLGQGLETSTYPGEVI	F <mark>SIALAIA</mark> GLLLFALLI	IGNMQ <mark>T</mark> YLQ <mark>SLT</mark>	IRLEEMRVKRRDSEQWMHHRMLFPELRERVR : 469
BoCNGC5 : FFCLW		WGLQNLSTLGQGLETSTYPGDVI		IGNMQ <mark>T</mark> YLQ <mark>SLT</mark>	IRLEDMRVKRRISEQWMHHRMLFPELRERVR : 469
DIAU20000 . CHOIM		WGLQNLSTLGQGLQTSTFPGDVL	F <mark>SIAIAIA</mark> GLLLF <mark>AL</mark> LI	IGNMQ <mark>T</mark> YLQ SLT	VRLEDMRIKRRISEQWMHHRSIFQNLRERVR : 428
Boomboo . Groom		WGLQNLSTLGQGLQTSTFPGEVL	F <mark>SIAIAIA</mark> GLLLFALLI	IGNMQ <mark>T</mark> YLQSLT	VRLEDMRIKRRISEQWMHHRSLEQNLRERVR : 457
220000000		WGLRNLSSYGQNITTSVYLGETL	FCITICIFGLILFTLLI	IGNMQTSLQSMS	VRVEDWRIKRRITDEWMRHRQLFPEIQERVR : 405
BOCNGCIS .		SYGQNITTSVYLGDTL WGLRNLSSYGQSLAASTLSSDTL	FOITICIFGLILFTLL	IGNMQTSLQSMS	VRVEDWRVKRRITDEWMRHRQIPPEIQERVR : 392
		WGLRNLSSYGQSLAASTLSSETL WGLRNLSSYGQSLAASTLSSETL	FSCFICVAGLVFFSHL.	IGNVQNYLQSTT	ARLDEWRVRRRDTEEWMRHRCLFGEIGERVR : 414 ARLDEWRVRRRDTEEWMRHRCLFGEIGERVR : 414
BOOMOOII . INGAN		WGLQQLSSYGQNLSTITFIGETT	FANT TATEGUL FART		
braditiod . reden		WGLQQLSSYGQNLSTITFIGETT	PAVETATEGLVLPAHL.		VRLEDWRLKKRDTPEWMRHRQLFEDLRDRVR : 441
Bra007839 : LYCLW		FGLQQLSSYGQNLDTSTSVLDTM	FATIVATEGI VI FALL		VRLEDWRLKRRITDEWMGHRQLFCNLRERVR : 442
BoCNGC12 : LYCLW		FGLQQLSSYGQNLDTSTSVLETM	FAILVAIFGLVLFALL	IGNMOTYLOSIT	WRLEPWRLKRRITDEWMGHROLFONLRERVR : 442
		FGLONLSSYGONLDTSTSVLPTM	FAILVALEGLVLEALL	IGNMOTYLOSIT	VRLEEWRLKRRDTEEWMGHROLEODLRERVR : 438
BOCHCOIL . HECHL		FGLQNLSSYGQNLDTSTSVLDTM	F <mark>AILVAIF</mark> GLVLFALLI	IGNMQ <mark>T</mark> YLQ SIT	VRLEDWRLKRRITEEWMGHRQLFQDLRERVR : 438
biddiibdo . ieden		WGLKNLSSLGQNLSTSTYVGDII	F <mark>AVV</mark> MATLGLVLFALLI	IGNMQ <mark>T</mark> YLQ <mark>STT</mark>	MRLEDWRIRRTDTEQWMHHRQLEPELRQAWR : 434
		WGLKNLSSLGQNLSTSTYVGDII	F <mark>AVVMATL</mark> GLVLFALLI	IGNMQ <mark>T</mark> YLQ STT	MRLEBWRIRRTETEQWMHHRQLFPELRQAVR : 434
		WGFQQISTLAGNQVFSYFLGEVF	F <mark>T</mark> MGI <mark>IGL</mark> GLLLF <mark>AL</mark> LI	IGNMQ <mark>N</mark> FLQ <mark>ALG</mark>	RRNIDMTLRRRIVEQWMSHRRIFEGIRKRVR : 546
		WGFQQISTLAGNQVFSYFLGDVF	F TMGIIGL GLLLF AL LI	IGNMQ <mark>N</mark> FLQ ALG	RRNLDMTLRRRLVDQWMSHRRLPEGIRKRVR : 545
BoCNGC20 : SYSLF		WGFQQISTLAGNLIPSYFLGEVF	F TMGIIGL GLLLFALLI	IGNMQNFLQSLG	RRNLDMTLRRREVEQWMRHRRLEGDIRKRVR : 539
BoCNGC22 : ISSEL Bra031529 : KIHELSFLGFS	SANLIRMFYGFDIKSALVGICGSLTLAYCQLSI	WGFQQISTLAGNQVFSYFLGEAS	ETMVIIALGLLLEPLL.		HKRFLEGIRGRVR : 522 QRNLDMTLRQRIADQWNSHRRFFEGIRKRVR : 592
Bra001676 : SMSL9	MALIRMFIGFDIRSALVGICGSLILAICQLSI	WGFQQISTLAGNQVFSYFFGEVL	ETMOTIGICIELEAFL.		RRDTBMTKRRRVESHRRFELGIRRKVE : 592 RRDT <mark>BMT</mark> VRRRL <mark>VEQWMS</mark> HR <mark>R</mark> FEKDIRKRVR : 508
BoCNGC18 : SYSLE		WGEOOTSTLAGNOVESVEEGEVL	FTMCTTGLGI FLFATL	IGNMON FLOST G	
Bra001678 : IYSLE		WGFOOISTLAGNLVFTDFVWPVL	FTMAIIGLGI FLFALL	IGNMONFLOSIG	RRNMEMTLRREVNNWMSHRCFFDDIRTRVK : 483
BoCNGC19 : IYSLF		WGFQQISTLGGNQVPSYFIWEVL	F <mark>TMAIIGL</mark> GLFLFALL	IGNMONFLOSIG	RRNM DMTLRRR DVNNWM SHRQFFDDIR TRVK : 483 RRNM DMTLRRR DVNKWM SHRQFFDVIR BRVR : 386 DRRRM DMLRRR DVEQW SHRLLFEDIR KRVR : 529
Bra021265 : SYSLF		WGFQQISTLAGNLSPSYSVGEVF	F <mark>TMGITGL</mark> GLLLFARL	IGNMHNFLQAL	DRRRMDMMLRRRI <mark>VEQWMS</mark> HR <mark>llfed</mark> IRKRVR : 529
BoCNGC24 : SYSLF		WEIQQISILAGNISPEISVODVI	PIMGIIGLGLLLPARL.	IGNM <mark>HN</mark> FLQ <mark>AL</mark>	DRRRMEMMLRRRIVEQWASHRLLFEDIRKRVR : 529 DRRRMEMMLRRRIVEQWMSHRLLFEDIRKRVR : 542 DRRRMEMMLRRRIVEQWMSHRLLFEDIRKRVR : 545 DRRRMEMMLRRRIVEQWMSHRLLFEDIRKRVR : 535
Bra022232 : SYSLF		WGFQQISTLAGNQTPTYSVGDVY	F <mark>T</mark> MGI <mark>IGL</mark> GLLLFARL	IGNM <mark>HN</mark> FLQ <mark>AL</mark>	DRRRMDMMLRRRI <mark>VDQWMS</mark> HR <mark>LLFED</mark> IR <mark>KRV</mark> R : 542
BoCNGC25 : SYSLF		WGFQQISTLAGNQTPTYSVGEVY		IGNM <mark>HN</mark> FLQ <mark>AL</mark>	DRRRMEMMLRRREVEQWMSHRLLFEDIRKRVR : 545
Bra022233 : SFSLF		WGFQQISTLAGNQTPSYSVGEVY	F T MGI <mark>IGL</mark> GLLLFARL	IGNMHNFLQAL	DRRRTDMMLRQRDVDQWMSHRILFDDIRKRVR : 535
BoCNGC26 : SFSLE		WGFQQISTLAGNQTFSYSLGEVY	FTMGIIGLGLLLFARL:	IGNMHNFLQAL	DRRRIDMMLRORDVDOWMSHRLLPDDIRKRVR : 531
Bra029958 : SYSIL		WGFQVMVYSN			NVWSLDMTLRRRIVEQNMSHRRLFEGIRKRVR : 448 WKHKLHWLPSKTGSDRRSLEMTLRRRIVEQNMSHRRLFEGIRKRVR : 569
BoCNGC23 : SYSLL		WGFQQISTLAGNQVFSYFFPDVV WGLMTLSTFGN-LESTTEWSEVV	FINGLIGUGLLLFALL	IGNEQNELQELGKRMIIFGO	WKHKLHWLPSKTGSDRRSLEMTIRRRIVEOWNSHRRIFEGIRKRVR : 569
Bra022702 : LFFIF		WGLMTLSTFGN-LESTTEWSEVV			SRKQAMHLRMRNIEWWKKRHLFLGFRQRVR : 453 SRKQAMHLRMRNIEWWKKRHLFFGLRQRVR : 453
BoCNGC15 : LFPIF Bra003001 : LFPIF		WGLMILSTFGN-LESTTEWSEVV	ENTINEISCILLVIML.		SRKQAMILKMEN IBWWMKKRHLFFGLEGERGEVE : 453 SRKQAMHLKMEN IBWWMKKRQLFLGYRQEVE : 456
BocngC16 : LEPIE		WGLMTLSTFGN-LESTTEWSBVV	FNTTVLTSGLLIVTML	IGNTKVFTHATT	SKKQAMBLKMERIEWWORKRQLELGIRG.W. 456
Bra008699 : LMPIA		WGLMTLSTFGNDLEFTSNWLEVV	FSTVMVLSGLLLPTLL	IGNTOVET HAVM	AKKRKMQIFCCRDMSWMKRRQIFSRIRQRVR : 430
BoCNGC17 : LYFIF		WGLMTLSTFGNDLEFTSNWLEVV			AKKRKMQIRCRIMEWWMKRRQLESRLRQRVR : 480
		g s e			e rewnhlp r6

760	* 780	* 800	* 820	* 840 * 860	* 880 * 900
Bra004537 : EYEQYKNQETRGVEEE	ALLSSIFKDIRKEIK			EDMVFIMRGKI ISTTTYCGQTGFFNIAH-LEAGDFCGDII	IWADDPNTS-HLPISTRTVQA : 567
BoCNGC2 : KYEQYK <mark>W</mark> QETRGV <mark>E</mark> EE	VLLSSIPKDIRKDIK	RHLCLNMLK <mark>TVFWFKAMDD-R</mark>	I DAUCARLKPALYTENSYIVREGEPT	ED <mark>MVFIMRC</mark> KITSTTTYCGKSGFFNSVS-LGVGQFCGD <mark>L</mark> I	TWALDPNTS-HFPISTSTVQA : 567
Bra034281 : RYENYK <mark>W</mark> RKTRGI <mark>E</mark> EE				AEMLIITKCSIKSMIGSSDITGYYDSSY-LQAGDICGDLI	FWVLDPHSSSSLPTSDRSVLT : 522
BoCNGC3 : RYENYKWRKTRGIEEE	ALLHSIFKDIRLETK	RHL <mark>YLTLLNSVPWLNMMDDSW</mark>	I EAICDRVKSVFYSANSYIVKEGDPV	AEMLIITKCSIKSMIGFSDITGYYDSSY-LQAGDICGDLI	FWVLDPHSSSSLPTSDRSVLT : 522
Bra003323 :E <mark>N</mark> EKNSSIERE	AHLRSIFKDIRVEAK	RNIYLYSIENVFWISFIDDDW	LINETYDRVKPVFYSQKSYILGEGDPV	KEMLIVTYCELESMTESFETSSYSDIQIRLMKGDVWEDLI	FWALDPHTSPSLPISNGTVTT : 559
Bra031515 : KSEDHKWRETRGTKEE	SFLRGIPKNIRLEIE	R <mark>QIYQKLLKHMPWFED</mark> MDD-R	LLDSWCARLKTVIYTEDSYIVDEGEQI	ENMLFINRCTVIVTEKKTTFFRSVGEFCGEELI	SWALLDPHSSCVPISSMIIKA : 419
Bra000937 : RYEQYKNQETRGVEEE		RH <mark>FCLDLLKKVPLFEIMDE-Q</mark>			.TWALDPQSSSHFPISPRTVQA : 575
BoCNGC1 : RYEQYKNQETRGVEEE	NLLRNIFND <mark>L</mark> RRDIKI	RHFCLDLLKKVPLFEIMDE-Q	IDAVCDKLRPVLYTENSYAIREGDPV	EEMLFVMRGKUMSATTN©GRTGFFNAVYLNASDFCGEDLI	TWALDPQSSSHFPISPRTVQA : 576
Bra022632 : RYEQYENQE	NLLSNIFKD <mark>I</mark> RRDIKI	RHICLALIMRVPMFEKMDE-Q	IDAICORLOPVLYTEESYIVREGDPV	DEMLFIMRCKILIMTINGGRTGFFNSEHIGAGDFCGEELI	TWALDPHTSSNLPISTRTVRA : 604
Bra003081 : RYEQYENQE TRGVNEE	NILSNIFKDIRRDIK	RHICLALWMRVPMFEQMDE-Q	IDAICORLOPVLYTEESYIVREGDPV	DEMLFIMRCKILIMTINGGRTGFFNSEHIGAGDFCGEELI	TWALDPHTSTNLPISTRTVQA : 609
Bra020402 : RYDQYRMLETRGVDEE	YLVQNIFKDIRRDIK	RHICLAIVRRVPIFESMDD-K	LIDAICMRLKPCLFTESTYLVREGDPV	DEMLFIIRGRIESVTTDEGRSGFFNYSLIKEGEFCGEELI	TWALDPKSGVNLPSSTRTVKA : 624
BoCNGC7 : RYDQYKMLETRGVDEE	YLVQNIFKDIRRDIK	RHICLAIVRRVPIFESMIE-K	II DAIICMRIKPCLFTESTYLVREGDPV	DEMLFIIRCRIESVTTDCGRSGFFNYSLIKEGEFCGEELI	IWAIDPKSGVNLPSSIRIVKA : 596
Bra024067 : RYDQYKWLETKGVDEE	NIVQNIFKD <mark>I</mark> RRDIKI	RHLCLALVRRVPLFENMEE-R	II DAI CERLKPCLYTEKSYLVREGDPV	NEMIFIIRCRIESVIIDCGRSGFFNRSLIKECDFCCEPLI	TWALDPKSGSNLPSSTRTAKA : 587
BOCNGC6 : RYDQYRWLETKGVDEE		RHICLALVRRVPLFENMEE-R	I DAUCERLKPCLYTEKSYLVREGDPV	NEMIFILRCRIESVTTDEGRSGFFNRSLIKEEDFCEEDLI	TWAIDPKSGSNLPSSTRTAKA : 613
Bra039221 : RYDQYKWLETRGVDED		RHICLALVRRVPLFENMDE-R	LDAICERIKFCLYTEKSFLVREGDFV	NEMLELIRCRUESVTTDEGRSGFYNRSLUKEEDFCEDELI	TWAIDPKSGSNLPSSTRTVKA : 598
BoCNGC4 : RYDQYKWLETRGVDEE		RHICLALVRRVPLFENMDE-R	IDAICERIKFCLYTEKSFLVREGDFV	NEMICULRERUESVTTDEGRSGFYNRSLUKEEDFCEDDIL	TWAIDPKSGSNLFSSTRTVKA : 598
Bra032132 : RYDQYKALETRGVDED	NIVSNIPKDIRRDIK	RHICLALVRRWPIFDNMDE-R	LDAICMRIKPCLYTEKSFLVREGDPV	NEMLETTRERLECVTTDeGRSGFYKRSLIKEeDFCeDstl	TWAIDPKSGSNLPSSTRTVKA : 608
BOCNGC5 : RYDCYKALETRGVDED	NIVSNIEKDIRRDIK	RHICLALVRRWPLFENMDE-R	T DATCMRLKPCLYTEKSFLVREGDPV	NEMI FILLRORLESVITTD GGRSGFYNRSLLKEGDFCGDELL	TWALDFKSGSNLFSSTRTVKA : 608
Bra026086 : RYDCYKALETRGVDED	NIVQSIEKDIRRDIK	RHICLNIVERWPIFANMDE-R		NEMIFIIRCRIESVITDOGRSGFFNRGLIKEODFCOEDLI	TWAIDPKAGSNLPSSTRTVKA: 567 TWAIDPKAGSNLPSSTRTVKA: 596
BOCNGC8 : RYDCYKALETRGVDEE		RHICINIVERVPIPANDIE-R	IDAICERLKPSLYTESTYIVREGDPV	NEW FUTRER ESVIILEGRSGFFNRGLIKEEDFCEEDI	
Bra008733 : RFVQYKALATRGVDEE	SILQS FILLRELQ	RHICLALVERNPFH SQUID-Q		DEML FVIRGCIESSTINGGRSGFFNSTIRFGDFCGEELI	TRAIMPNSTLNFFSSTRSVRA : 544
BoCNGC13 : RFVQYKALATRGVDEE	ATTRACTOR AND A	RHICLAIVERWFFF5QUUD-Q	I DAICGCLVSSLSTAGTYIFREGDPV		TTALMPNSTLNFPSSTRSVRA : 531 TTALMPNINQNLPLSTRTVRT : 553
Bra018089 : RFVQYRMLTTRGVDED BoCNGC14 : RFVOYRMLTTRGVDED		RHICLALVRRVPFFAQMDD-Q	IDAICERIVESINIKDI IVIREGEEV		TWATMPNINONLPLOIRIVRI : 553
Bra011186 : RYECYKYLAARGVDEE	VILOSIFTOTREDIC	RHLCLDLVRRWPFFSOMDD-O		TEMI FUIRCRIESSTINGGRIGFFNSIID REGEFCEEDI	SNAT LPKSTLNLFSSTRTVRA : 580
BOCNGC10 · RYEOXEDIAARGVDEE	VILOST BTDI PRDIC		T DATCERTVSSICTEGTTI VREGELT	TEMI ETTPODI ESSTINGGETGEENSTIL DEGREGEETT	SNATLPKSILNLPSIRIVRA : 580
Bra007839 · REVOYED ATROVIDE	TTLHSTEADTRRDTO	RHICLDIVERVELEACHDD-C	T DATCERLYSSISTOCNYLVRECODW	TEMI FILLOKI ESSTINGGRIGFINSITI KEGEFCGEFLI	ANAT LPKSKVNLPSTRTVRA : 581
Bocngc12 : RFVQIANLATRGVDEE	TTLHSTPADIRRDTO	RHICLDIVERVELEACHD-C	L DAICERLYSSISTOGNYLVREGDPV	TEMLETIRCKLESSTINGGRIGEFNSITEKPCEFCCEFL	VNALLPKSKVNLPSTRTVRA : 581
Bra032081 : REVOYKNLATROVDED	TTTHSTEADTRRDTO	RHICIDIWRRWPIFAOMD-O			ANALLPKSKVNLPSTRTVRA : 577
BoCNGC11 : RFVCYKNLATRGVDEP	TILHSTPADIBRDTO	RHICLDIVERVELEACHDD-C	L DAUCERIVSSISTOGNYIVREGDPV	TEMTETTERKUDSSTTNEGETGEENSTTLKEGEFCGEFLI	AVALLPKSKVNLPSTRTVRA : 577
Bra011963 : KYDOYKWLATRGVDEP	ALLISTPLDIRRDIK	RHICEDIVERVELEDOMDE-B	IDATSERIKPALFTEGTFLVREGDFV	NEMT FUTRCHUDSYTTN GGRTGFFNSCLIGEGDFCGEFLI	TWA DPRPVVILPSTRTVKA : 573
BOCNGC9 : KYDCYKWLATRGVDEE	ALLISTELDIRRDIK	RHICEDIVERVELEDOMDE-B	ILDAISERLKPALCTEGTFLVREGDPV		TWANDPRPVVILPSTRTVKA : 573
Bra021266 : EAERENNAATRGVNEE	LIFENMEDDICRDIR	RHLFI-FLKKWRIFSLMDE-S	IL DAIRERLKORT MISSSTVLHRGGLV		TWC ERSSVNPDGTRIRIPSKGLLSYRNVKC : 688
BoCNGC21 : EAERFNNAATRGVNEE	LIFENMEDDLORDIR	RHLFI-FLKKWRIFSLMDE-S	ILDAIRERLKORTYISSSTVLHRGGLV		TWCLERSSVNPDGTRIRIPSKGLLSYRNVRC : 687
BoCNGC20 : EAERFNNAATRGVNEE	LIFKNMEDDLOREIR		ILDAIRERLKORTYIRSSMVLHRGGLV		TWCLERSSVNPDGTRIRMPSKGLLSNRNVRC : 681
BoCNGC22 : LAEWVNNAATRGENEK	IVFENMENDLORDIR	RHLFI-FLKKVRVFSKMDE-L	ILDAIRERLTYRRYISSSTVLHRGGVV	EKMVFIVRCEMESFGEDGYVLPLSEGDVCGEELI	ANCIGRSSVNPDGTRIRMPSKGLVSNRNVRC : 664
Bra031529 : EVERFHWAARRGVDEE	ILFNNMFDDIQRDIR	RHIFK-FINKVRIFTIMDE-S	IINAIRERIKHITYISSSVVFSAGDVI	EKIVFIVRCEMESIGKDGSVISISEGDVFGEELI	SWCLERAASNTDGTRIWIKRKGLLSYRSVRC : 734
Bra001676 : EVERLNNNATRGVNEE	ILFENMFDDIQRDIR	RHLFA-FLKKVRIFSEIDE-S	ILDAMRARLKORTYLKNNKVLHRGGVV	KKMVFILRCKMESIGEDGYRTLLSEGDVCGEELI	TWCQERSSVNPDGTIIRMPSKGLLSSRDVWC : 650
BoCNGC18 : EVERLNNNATRGVNEE	LIFENMEDDIQRDIR	RHLFA-FLKKWRIFSEIDE-S	ILCANRARLKORTYLKNNKVLHRGGVV		TWCQERSSVNPDGTMIRMPSKGLLSSRDVWC : 644
Bra001678 : NAERLNWSSTRGVNEE	ILFENMSDDIQRDIR	RHLFA-FLKKVRIFSKMDE-P	ILDA <mark>IRE</mark> RLKHKTY <mark>LNGSMVLHSGDLV</mark>		TWY-ERSSLNPDGTRIRMPSKGLLSNRDVKC : 624
BoCNGC19 : DAERLNWSATRGVHEE	ILFENMFDD <mark>I</mark> QRDIR	RHLFA-FLKKVRIFSKMDD-S	IIDAIRERIKHKTYVNGSMVIHRGDIV		INCQERSSVNPDGTMIRMPSKGLISSRAVWC : 528
Bra021265 : EAERFNWAATRGVNEE	FIFENMPEDIIRDIK	RHIFK-FLKKVRIFSIMDE-S	ILISIRERLKQRTYISSSTVLHRRGLV		TWCLERSSVNPDGRSIKLPLKGLVSNRSVRC : 671
BoCNGC24 : EAERFNNAATRGVNEE	IIFENMFEDIRRDIK	RHIFK-FIKKVRIFSIMDE-S	IIISIRERIKQRTYISSSTVIHRRGIV	EKMVFIVRCGMESIGQDGSVLLISEGDVFGEELI	TWCIERSSVNPDGRSIKLPLKGLVSNRSVRC : 671
Bra022232 : EAERFNWAATRGVNEE	ILIFENMFDDIQRDIK	RHIFK-FIKKWRIFSIMDE-S	IIDAHRERIKQRTYIRSSTVIHRKGIV	EKMVFIVRCEMESIGEDGSVLPLSEGDVCGEPLI	TWCIERSSVNPDGTRIKMPTKGLVSNRNVRC : 684
BoCNGC25 : EAERFNMAATRGVNEE	IIFENMEDD IQ RDIK	RHIFK-FLKKWRIFSIMDE-S	IIDA <mark>H</mark> RERIKQRTYIRSSTVI <mark>HRKGI</mark> V	EKMVFIVRCEMESIGEDDSVLFISEGDVCGEPLI	TWCLERSSVNPDGTRIKMPTKGLVSNRNVRC : 687
Bra022233 : EAERFNWAATRGVKEE	IIFENMEDDIQRDIK	RHLFK-FLKKWWIFSLMDE-L	IIDAHRERIKQRRYIRSSTVIRRKGIV	EKMVFIVRGERESIGEDGSVLPISEGDVCGEPLI	TWCLERSSVDPDGTRIKMPTKGLVSNRSVRC : 677
BoCNGC26 : EAERFNWAATRGVKEE	IIFENMEDDIQRDIK	RHIFK-FIKKWWIFSIMDE-L	IIDAIRERIKQRRYIRSSTVIRRKGIV		TWCLERSSVDPDGTRIKMPTKGLVSNRSVRC : 673
Bra029958 : EAERFNNAATRGVNEE	LIFENNHDD QGDIR	RHIFI-FLKKWRIGSLWDE-S	ILDSIRERLRORTYISGSTVLHRWGPV	EKIVFVVRCEMESTGEDGSVLFLSEGDVCGEDLI	TWCIERSAVNLDGRMLSKGLLSSRNVKC : 587
BOCNGC23 : EAERFNNAATRGVNEE	LIFENNHDD QGDIR	RH FI-FLKKWRIFSLMDE-S	TIS REFLECTINGSTVIHRWGLV	EKIVTIVREDAESIGEDESVLPUSEEDVCEEDLI	HWCHERSAVNLDGRMLSKGLLSSRNVKC : 708
Brau22702 : NYERQRWAAMRGVDDC	EMVQNIHEGIRRDIK	YH CLDLVRQWPLRQHNND-L	ENICORVESLIFTEGETIÇEEGDAV	EKIVFVRGEMESTGELGSVLFUSEGUVCEBLI EKIVFIVRGEMESIGEDGSVLFUSEGUVCEBLI QRMLFVRGHUQSQLIRDGVKSCCMUGPENFSGDELI QRMLFVRGHUQSQLIRDGVRSCCMUGPENFSGDELI QRMLFVRGHUQSQLIRDGVRSCCMUGPENFSGDELI QRMLFVRGHUQSQLIRDGVRSCCMUGPENFSGDELI QRMLFVRGHUQSQLIRDGVRSCCMUGPENFSGDELI	SWCHRRPFVERLPPSSTIVT : 590
BOCNGC15 : NYERQRWAAMRGVDDC	EMVQNILEGIRRDIK	YF CLDLWRQWPLRQHM D-L	ENICORVESLIFTEGETIQEEGDAV	QHOLFWVRCHIQSSQLLRDGVKSCCMIGPENFSEDDIN	SWCHRRPFVERLFPSSTIVT : 590
Brauu3001 : NYERQHWAAMRGVDBC	ENVOIL PEGLERDIK	YE CLULWROWPLROHM D-L	ENICERVISE IFTIGETTICKEGDAV	QHOLFWYRCH QSSQLLRDGVRSCCM GPENFSEDDIN	SWCHKKPEVERLEPETST VT : 593
BOCNGC16 : NYERQRWAAMRGVDBC	ENVONTPEGERRDIK	YELCEDEWSQMPLEQHMED-L	ENICORVESLIFTEGETIQEEGDAV	QHOLFWVRCH QSSQLLRDGVRSCCM GPENFSEDDIN	SWCHRRPFVERLFPETST VT : 593
BEAUUG699 : KFEKQKWIALGEEDDL	TI THEIDERGERREIT	N CUDI INVERIAGO D-L	NICLEAR PROISEDER IRECOPT	QHAIFIARERVKRNQSLSKGVVATSTIEPEGYLEDALI QR <mark>MIFIMRE</mark> RVKRNQSLSKGVVATSTIEPEGYLEDALI	
W t q ee			56 6 ~ ~ ~	GAGIRIGRERAKRNOSLSREVVAISIBEREGILEDIN 5 66f6 G g g eLI	
w ug ee		TH 0 0 1 00		, sore g g eti	16 16

1	*	920	*	940	*	960	* 980	* 1000	* 1020	* 1040	*	
Bra004537 : E	TEVEGEVISA	EDIKFFSTQYR	RLHSKQLRHTC	YSVQNQ1	WAACFIQAAW	KRYCREKLSRV	LREEE	ERLQN	ILQTTDDSGGNKLNLGAAIN	ASRFASHALRNVRANAAAF	SSMLP	: 682
BoCNGC2 : Q	TEVEGEVISAI	DD <mark>I</mark> KFVATQYR	RINSKQLRHMFR	YHSVQWRT	WAACFIQAAW	KRYCRKKLSRA	LREEE	ERLEN	ILQT-DDSGGNKLNLGAAI	YASRFASHALRNVRANAAAF	RNSMLP	: 683
										VSRFVSKALRNRQKNAANC		
BoCNGC3 : I	TDVEGFILLHI	dd <mark>i</mark> kfvashfn	RSHSSRLRHMFR	FYSAHWRI	WAACFIQ <mark>A</mark> AWI	REHCKRKLSRI	LHAKR	DYNH-	-IPQGPQLNLGAAL	VSRFVSKALRNRQKNAANC	CSISP	: 631
Bra003323 : I	TYVEGLTISA	DDIKCHS		KSWRS	WAA <mark>FY</mark> IQ <mark>A</mark> AWI	KAHCRRKASKI	LPAIK	DEQQ-	-ILQDTQRNLGATLY	ASREVSKALRNRHVDSAEC	CSSFP	: 649
Bra031515 : R	TEVEGEVISAI	DDIKEVAAQYO	RLHRKKARHISRQE	FQLHSRKWRN	WAACFIQAAW	TEYCREKLSKD	LGEEE	AKLHS	IIQKDDSAG-NTHNLGGTA	FASRLASTVLRNLRVNASRF	KDRVR	: 538
										ASRFASNALRNLRQHNNNT		
BoCNGC1 : I	TEVEAF <mark>AL</mark> AAI	ED <mark>I</mark> KLVASQFR	RLHSKQLQHTFR	FYSVQWR1	WGASFIQ <mark>A</mark> AWI	RRHCRRRLARS	LTQEE	DQFRI.	AVAKRERRAASSSSLVATL	ASRFASNALRNLRQHN1	LPLLP	: 691
Bra022632 : I	VEVEAF <mark>AL</mark> KAI	DD <mark>I</mark> KFVASQFR	RLHSKQLRHTFR	FYSQQWRI	WAA <mark>CF</mark> IQ <mark>A</mark> AWI	RRHVKKKMEES	LKEEE	NRLQD	ALAKEACGSSPSLGATM	ASRFAANILRTIRRSGSVF	RKPRMP	: 719
Bra003081 : I	VEVEAF <mark>AL</mark> KAI	DN <mark>I</mark> KFVASQFR	RLHSKQLRHTFR	FYSQQWRI	WAA <mark>CF</mark> IQ <mark>A</mark> AWI	RRHVKKRLEES	LREEE	NRLQD	ALAKQACGSSPSFGATM	ASRFAANILRTIRRSGSVF	RKPRML	: 724
Bra020402 : I	TEVEAF <mark>AL</mark> ASI	EE <mark>I</mark> KFVASQFR	RLHSRQVQHTFR	FYSHQWRI	WAA <mark>CF</mark> IQ <mark>A</mark> AWI	RRYCKR <mark>KKMEE</mark>	АЕАЕА	VPMST-	TGSSSSMGAAFI	LVTKFAASALRTIHRNRNTF	?	: 728
BoCNGC7 : I	TEVEAF <mark>AL</mark> ASI	EE <mark>I</mark> KFVASQFR	RLHSRQVQHTFR	FYSHQWRI	WAA <mark>CF</mark> IQ <mark>A</mark> AWI	RRYCKRKKMEE	АЕАЕА	VPMST-	TGSSSSMGAAFI	LVTKFAASALRTIHRNRNTF	?	: 700
Bra024067 : I	TEVEAF <mark>AL</mark> IAI	DE <mark>l</mark> kfvasqfr	RLHSRQVQHTFR	FYSQQWRI	WAA <mark>IF</mark> IQ <mark>A</mark> AWI	RRYV <mark>KKKKLEQ</mark>	LKKEE	EEE	GEGHVASIRATF	LASKFAANALRKVHQNRIA-	А	: 690
BoCNGC6 : I	TEVEAF <mark>AL</mark> IAI	DE <mark>l</mark> kfvasqfr	RLHSRQVQHTFR	FYSQQWRI	WAA <mark>IF</mark> IQ <mark>A</mark> AWI	RRYVKKKKLEQ	LKKEE	EEEEE-	EGEGPVASIRATF	LASKFAANALRKVHQNRIA-	A	: 719
Bra039221 : I	TEVEAF <mark>AL</mark> IAI	de <mark>l</mark> kfvasqff	RLHSRQVQHTFR	FYSQQWRI	WAA <mark>CFIQ</mark> AAWI	RRYTKRKKLEE	LRKEE	EMEEES	STARLIAGGSSPFSIRATFI	LASRFAANALRGVRKNRTAP	KLLALS	: 716
BoCNGC4 : I	TEVEAF <mark>AL</mark> IAI	DE <mark>l</mark> kfvasqff	RLHSRQVQHTFR	FYS <mark>QQ</mark> WRI	WAACFIQ <mark>A</mark> AWI	RRYTKRKKLEE	LRKEE	EMEEES	SAARLIAGGSSPYSIRATFI	LASRFAANALRGVRKNRTAF	KLLALS	: 716
Bra032132 : I	TEVEAF <mark>AL</mark> IAI	de <mark>l</mark> kfvasoff	RLHSRQVQHTFR	FYSQQWRI	WAA <mark>CFIQ</mark> AAWI	RRYTKRKKLEQ	LRKEE	EEEEEE	SAARLIAGGS-PYSIRATFI	LASKFAANALRSVHKNRIRF	KSNLAP	: 725
										LASKFAANALRSVHKNRIRF		: 724
										FASRFAANALKGHRLRSTE-		
										FASRFAANALKGHRLRSTE-		
										LASKFAANTRRGTNQKASSS		
BoCNGC13 : I	SEVEAFAI SAI	EDIKEVAHQEK	RLQSKKLQHAFR	YYSHQWRA	WGACFVQSAW	RRYKRRKLAKE	LSLHESSGYYYRDETGYN	EEGDEENYYGSDDDDFE	GERLSVDNTNNSQNLGATMI	LASKFAANTRRGTNQKASSS	SSSTGKKDGS	: 677
										LASKFAANTKRGVLGNQRGS		
										LASKFAANTKRGVLGNQRGS		
Bra011186 : I										LASRFAANTRRGV		
										LASRFAANTRRGV		
										LASRFAKNTRR		
										LASRFAKNTRR		
										LASRFAKNTRK		
										LASRFAKNTRK		
Bra011963 : I	YEVEAFALRA	DOLKEVAIGER	RTH2KOTKHKLK	FYSHQWRI	WAACFIQAAW	RHKKRKIAIE	LRVKEEFQCMFETAS		MVRLI	NSGKFTR	56	: 664
BoCNGC9 : I	TEVEAFADRA	LILKEVALGER	RTH2KÖTKHKLK	FISHQWRI	NAACFIQAAW	WEEKKEK IAIL	ERVKEEFQCMFEIA5		MVRLI	NSGKF1R	56	: 664
Bra021266 : V	TNUEAFSISV	ADDEDVISLAS	RELENPRVQGAI	-RIESPIWRI DWESDWEDI	RAARQIQVAW	RIKKERLUKLI	TAQSSISL					: 760
BoCNGC21 : V	TNVEAFSESV	ADDEDVISLIS	RELENPRVQGAI	RIESPIWRI		NUMBER OF A	TAQSSISL					: 759
BoCNGC20 : V	TRVEARSDOV	ADDELVIJLAJ	RELESNRVQGAI	-RIESPIWEI		REPORT OF A	1D02212F					. 724
BoCNGC22 : Bra031529 :	TNADAGSUSVI		MELKINKLQGAI	RSPRMSI	RateRQLSVPW	SURVERSTORL	SAÖ2212F					. 759
Bra001676 : V	TNVEARSISVA	ADIEDITSUAR	M			KDC	DKED					. 680
BoCNGC18 : V	TNVEARSTSV	ADIFDITSUP	N			IFT	DKED					. 674
Bra001678 : V	TNVFAFSUSVI		N			LET	SKES					. 654
BoCNGC19 : V	TNVEAFSUSV	ADTEDTMSLEP	N			LET	PKEP					: 558
Bra021265 : V	TNVEAESUSV	ADTEDVISUES	RFLRSHRVLGAT	-RYESPYWRT	RAATOTOVAW	YRREELHRLY	TAOSTSRR					: 743
BoCNGC24 : V	TNVEAFSTSV	ADLEDVISLES	RFLRSHRVLGAT	-RYESPYWRT	RAATOTOVAW	YRRELHRLY	TAOSTSRR					: 743
Bra022232 : V	TNVEAFSTSV	ADLEDVISLES	RELESHEVOGAT	-RYESPYWRT	RAAMOTOVAW	YRKKELERLL	LODNRVMKEMSDVRTGYR	LSWSGVVEGSGKOLDTR	355			: 786
BoCNGC25 : V	TNVEAFS	ADIEDVISLES	RFLRSHRVOGAI	-RYESPYWRI	RAAMOIOVAW	YRKKELERLL	LODNRVMKEMSDVPIGYR	LSWSGVVEGSGK				: 781
Bra022233 : V	TNVEAFS SV2	ADTEDVISIES	RFLRSNRVOGAI	-RYESPYWRI	RAAMOIOVAW	YRRKELER	KKONGDIDE					: 748
BoCNGC26 : V	TNVEAFSI SV/	ADIEDVISLES	RFLRSNRVOGAI	-RYESPYWRI	BAAMO TOVANI	YRKKRLFR1	RKONGEMDE					: 744
				-RYESPYCRI	RAATOIOVAW	YRKRELOKLS	TAOKKOYSSELIOKDMAK	T				: 670
BoCNGC23 : V	TNVEAF SI SAM	AD <mark>LEDVTSLL-</mark>	-FLRSHRVQGAI		RAATOIOVAW	YRK OLRKLS	TAOKKOYSLELIKKDMAK	Τ				: 789
Bra022702 : 1	ETTEAEGUDA	ODVKYVTCHER	YTFVNEKVKRSAR-		WAAVAVOLAW	RYKHELTLTS	LSFIR	PRR	PLSRCASLGEDKLRLYTAII	.TS		: 684
BoCNGC15 : I	ETTEAFGIDA	ODVKYVTOHER	YTFVNEKVKRSAR-		WAAVAVOLAW	RYKHRFTLTS	LSFIR	PRR	PLSRCASLGEDKLRLYTAII	.TS		: 684
Bra003001 : 1	ETTEAFGIDA	EDVKYVTOHER	YTFVNEKVKRSAR-		WAAVAVOLAW	RYKHRLTLTS	LSFIR	PRR	PLSRCASLGEDKLRLYTAII	.TS		: 687
BoCNGC16 : I	ETTEAFGI DAI	EDVKYVTOHER	YTFVNEKVKRSAR-		WAAVAIOLAW	RYKHRLTLTS	LSFIR	PRR	PLSRCASLGEDKLRLYTAII	.TS		: 687
Bra008699 : 1	DNIEAESIGS	EDERYTTDHER	YKFANERLKRTAR-		WAAVNIOMSW	RYRKETCGGV	GGSMS	PVSI	HS-VEGNSERRLLOYAAME	MS		: 711
BoCNGC17 : I	DSIEAFS <mark>I</mark> GSI	EDIRYITDHER	YKFANERLKRTAR-		WAAVNIOMSWI	RRYRKRTCV	GGSMS	PVSI	HS-VEGNSERRLLQYAAME	MS		: 708
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					-							

		1060 * 1080		
Bra004537		HMLSLLPCKFADPEFPMDET		702
BoCNGC2	÷	HMLSLLPCKPADPEFPMDET	÷	703
Bra034281	÷	HMLPPIPHKPADPEFSKN	÷	647
BoCNGC3	÷	HMLPPIPHKPADPEFSKN	÷	649
Bra003323	÷	EMLPDKPADPEFSKKEA	÷	666
Bra031515	÷	QISLPEKFVDFKFFMDEI	÷	556
Bra000937		PKFSEPDFSVDDD	÷	705
BoCNGC1	÷	PKFSEPDFGVDDD	÷	704
		ERMLLQKPAEPDFNSDDYCI		739
Bra022632	:	~	:	
Bra003081	•	ERMPPMLLLQKPAEPDFNSDDYMRIVPIYKNRSL	•	758
Bra020402	÷	IRELVKLQKPPEPDFTAEDAD	÷	749
BoCNGC7	÷	IRELVKLQKPPEPDFTAEDAD	÷	721
Bra024067	÷	KSTKELVIFQKPSEPDFSADDP	÷	712
BoCNGC6	÷	KSTKELVIFQKPSEPDFSADDP	•	741
Bra039221	÷	QPTKELLKVQKPPEPDFSADC	-	737
BoCNGC4	÷	QPTKELLKVQKPPEPDFSADC	-	737
Bra032132	÷	PSTKELVKFQKPPEPDFSADC	5	746
BoCNGC5	:	PSTKELVKFQKPPEPDFSADC	:	745
Bra026086	\$	-SSKRLLNLQKPPEPDFDAE	:	712
BoCNGC8	:	-SSKRLLNLQKPPEPDFDAE	:	741
Bra008733	:	SNSLKMPQLFKPDEPDFSMDKEDV	:	714
BoCNGC13	:	SNSLKMPQLFKPDEPDFSMDKEDV	:	701
Bra018089	:	DPTLKMPKMFKPEDPGFF	:	706
BoCNGC14	:	DPTLKMPKMFKPEDPGFF	:	706
Bra011186	:	VKDVEMPRFKKPEEPDFSAEPDD	:	728
BoCNGC10	:	VKDVEMPRFKKPEEPDFSAEPDD	:	727
Bra007839	:	MKDVDVPMLPKPEEPDFSVDAD	:	733
BoCNGC12	:	IKDVDVPMLPKPEEPDFSVDAD	:	733
Bra032081	÷	LKDVEVPMLPKPDEPDFSVDGD	:	728
BoCNGC11	:	LKDVEVPMLPKPDEPDFSVDGD	:	728
Bra011963	:	SDSGMVSSIQKPVEPDFSSE	:	684
BoCNGC9	:	SDSGMVSSICKPVEPDFSSE	:	684
Bra021266	:	~		_
BoCNGC21	:		:	_
BoCNGC20	:		:	_
BoCNGC22	÷		÷	_
Bra031529	÷		:	-
Bra001676	÷		•	-
BoCNGC18	÷		•	-
Bra001678	÷		•	-
BoCNGC19	÷		•	-
Bra021265	÷		•	-
BoCNGC24	÷		•	-
Bra022232	÷		۰.	-
BoCNGC25	÷		۰.	-
Bra022233	÷		۰.	-
BoCNGC26	÷		:	-
Bra029958				-
				-
		PKPNPDDFDDY		
		IRPH-DHLE		
BoCNGC17	÷	IRPH-DHLE	5	716