

100

Trubripossyt2a	MPKWNLFKHQTTMPVAAKPTG---ASALTVTTPAPVALVSAENSTE--PVNKNDADFDEIKNKFLNEIDKIPLPSWAIIAIAVVAALLIVTCCFCIVKKCCCKKKKNKK--
Trubripossyt2b	-MKFNFFK-NSQATVATEPIS--ATSVTTAPTAGVIPTTAAETPGPNNTEISKNDMFEEIKSKFLNEIDKIPLPPWALIAIAVVAALLMVTCFCFIKKCCCKKKKNKK--
Tnigroviridissyt2a	MTKWNLFKHQTTMPVAAKPTG---ASDLTVTPAPVALVSAENSTE--SVKKNDADFDEIKNKFLNEIDKIPLPSWAIIAIAVVAALLIVTCCFCIVKKCCCKKKKNKK--
Tnigroviridissyt2b	-MKFNFFK-KSQAAAATEPVG--ASTATVAPTEGVIPTSAADTPGSNNTEISKNDMFEEIKSKFLNEIDKIPLPPWALIAIAVVAALLMVTCFCFIKKCCCKKKKNKK--
Gaculeatusyt2a	MTKWNLFKHQTTMPMVVANPTG---ASALTVTTPAPVALVSTDNSTE--PVEKNDGFDEIKNKFLNEIDKIPLPPWAIIAIAVVAALLILTCCFCFIKKCCCKKKKNKK--
Gaculeatusyt2b	-MKFNLFR-KAEAVAAAEPTG--VTAATAAPTQAFVSTSVPDTSGSNNTEISKNDMFEEIKSKFLNEIDKIPLPPWALIAIAVVAALLFLTCCFCFIKKCCCKKKKNKK--
Olatipessyt2a	MKKFNVLPQTAPMVAAKPTG---AGDSSATPAPVAVVSNNDNSTE--PVNKNDADFDEIKNKFLNEIDKIPLPSWAIIAIAVVAALLILTCCFCFIKKCCCKKKKNKK--
Olatipessyt2b	-MKFNLFK-TPQAVAA-EPTS--GTTVTMATSPAVVSTTAPDISGSNNTEISKNDMFEEIKSKFLNEIDKIPLPPWALIAIAVVAALLVLTCCFCFIKKCCCKKKKNKK--
Dreriosyt2a	-MKWNVLKKKPAAMVGPEPTG---ASALTMAPA--VSTPADNSTEHQGPVSKNDVFGDIKNKFLNEMDKLPLPPWAIIAIAIVAVVLILTCCFCIVKKTCCLKKKKGKK--
Dreriosyt2b	-----MVGPEPTGPGGTHPSHTMTMAPAVSTPADNSTESEGTVNKNDVFEEIKSKFLNEIDKIPLPPWALIAIAVVAALLILTCCFCFIKKCCCKKKKNKK--
Xtropicalissyt2var1	-MHFNLFKKAEP--ETHTMPTSTEP--VVSQDNSTAVAGSGD-KSADTFRKIQQELMNQINKIPLPPWALIAIAVVAGLLIITCCFCICKKCCCKKKKGKKEK
Xtropicalissyt2var2	-----
Acarolinensissyt2	-MKWNLFKKTANPEPIIAATTGGPAASPTTTTAPPSLSTDNNTQISGPVE-SKEDVFAKIKEKFMNEINKIPLPPWALIAIAVVAGLLILTCCFCICKKCCCKKKKNKKDK
TguttataSYT2	-----MTFKQASMMAPEATASTLPMSTMENSTEAAGPGE-SKEDMFTKLRLDKFMNELNKIPLPPWALIAIAVVAGLLILTCCFCICKKCCCKKKKNKKKEK
OanatinusSyt2	-----MAAVP-----PGPPGAPGPV---GPADNSTETT-AGE-SKGDMAFKLKEKFFNEINKIPLPPWALIAIAVVAGLLILTCCFCICKKCCCKKKKNKKKEK
MdomesticaSyt2	--MRNIFKR--NQEPIVA-----PAATTATMPVVPAGPPDNSTESGGAGP-TGEDMFTQMKDKFFNEIQKIPLPPWALIAIAVVAGLLLLTCCFCICKKCCCKKKKNKKKEK
MmusculusSyt2	--MRNIFKR--NQEPIVA-----PATTTATMPI---GPVDNSTESGGAGE-SQEDMFAKLKEKLFNEINKIPLPPWALIAIAVVAGLLLLTCCFCICKKCCCKKKKNKKKEK
HsapiensSYT2	--MRNIFKR--NQEPIVA-----PATTTATMPI---GPVDNSTESGGAGE-SQEDMFAKLKEKLFNEINKIPLPPWALIAIAVVAGLLLLTCCFCICKKCCCKKKKNKKKEK

200

Trubripossyt2a	GKKGKGDMGMTNLKGGEKQQEDDDDEDDVEPGLTGDEKE-EEVKEKEKLGKLQYSIDYDFQENKLA VGILQAADLLSMDSGGTSDPYVKVFVLPDKKKKYDTKVHKKTLNP
Trubripossyt2b	GKKGKDGFNMKDMQGGKQLQDDDDDEEG--ETGLTEEEKE-EEDKEKEKLGKLQYSIDYDFENTKLT VGILQAADLLISMDSGGTSDPYVKVLLLPDKKKKYDTKVHKKTLNP
Tnigroviridissyt2a	GKKGKGDMGMKNLKGGEKQQEDDDDEDDVEPGLTGDEKE-EEVKEKEKLGKLQYSIDYDFQENKLT VGILQAADLLSMDSGGTSDPYVKVFVLPDKKKKFDTKVHKKTLNP
Tnigroviridissyt2b	GKKGKDGFNMKNMQGGKQHQDDDDDEEG--ETGLTEEEKE-EEEKEKEKLGKLQYSIDYDFENTKLT VGILQAADLLISMDSGGTSDPYVKVLLLPDKKKKYDTKVHKKTLNP
Gaculeatusyt2a	GKKGKGEMGMKNLKGGE---DEDDEDDVEPGLTGDEKE-EEVKEKEKLGKLQYSIDYDFQENKLT VGILQAADLLSMDSGGTSDPYVKVFVLPDKKKKYDTKVHKKTLNP
Gaculeatusyt2b	GKKGKDGFNMKNMQGEIHQDDEDDDEEG--ETGLTEEEKE-EEEKEEKLGLKLQYSIDYDFENAKLT VGILQAADLLISMDSGGTSDPYVKVQLLPEKKKKYDTKVHKKTLNP
Olatipessyt2a	GKKGKGEMGMKNLKGGENQKDDDDDEEDMEPGITGDEKE-EEVKEKEKLGKLQYSIDYDFQENKLT VGILQAADLLSMDSGGTSDPYVKVFVLPDKKKKFDTKVHKKTLNP
Olatipessyt2b	GKKGKDGFNMKNMQGGE--DDDDDEG--ETGMTTEEKE-EEEKEQKLGKLQYSIEYDFENTKLT VGILQAADLLMSMDSGGTSDPYVRVLLLPDKKKKFDTKVHKKTLNP
Dreriosyt2a	GKKGKGDMGMKNMKGGEKQEEDDDEE-DIDMGIT-EEKE-EEPKEKEKLGKLQFSLDYDFSASQLT VGILQAADLLSMDSGGTSDPYVKVFILPDKKKYDTKVHKKTLNP
Dreriosyt2b	GKKGKDGFNMKNMQGQD--DDDDDEG--ETGLTEEEKE-EEEKEVEKLGKLQYSLDYDFQDNKLT VGILQCADLLISMDSGGTSDPYVKVFILPDKKKYDTKVHKKTLNP
Xtropicalissyt2var1	GKGMKNALNMKDMKSGGQpDDDDDAE---TGLTEGEDKEEEEKEEKLGLQFSLDYDFQNNQMVGIIQATELPALDMGGTSDPYVKVFVLPDKKKKHETKVHRKTLNP
Xtropicalissyt2var2	●-----MQVGIIQATELPALDMGGTSDPYVKVFVLPDKKKKHETKVHRKTLNP
Acarolinensissyt2	-KGMKNAMNMKDMKG--QDDDDDDGD---GDEEGGEE-EEEKEPENLGLKLQFSLDYDFQANQLT VGILQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVQKKTLPN
TguttataSYT2	GKGMKNAMNMKDMKS--GNQDDDDAE---TGLTEGEGE-EEEKEPENLGLKLQFSLDYDFQANQLT VGILQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVQKKTLPN
OanatinusSyt2	GKGMKNAMNMKDMKG--G-QDDDDAE---MGLTEGEGEGEEEKEPENLGLKLQFSLDYDFQANQLT VGVLQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVHRKTLNP
MdomesticaSyt2	GKGMKNAMNMKDMKG---QDDDDAE---TGLTEGEGEGEEEKEPENLGLKLQFSLDYDFQANQLT VGVLQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVHRKTLNP
MmusculusSyt2	GKGMKNAMNMKDMKG--G-QDDDDAE---TGLTEGEGEGEEEKEPENLGLKLQFSLDYDFQANQLT VGVLQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVHRKTLNP
HsapiensSYT2	GKGMKNAMNMKDMKG--G-QDDDDAE---TGLTEGEGEGEEEKEPENLGLKLQFSLDYDFQANQLT VGVLQAAELPALDMGGTSDPYVKVFVLPDKKKKYETKVHRKTLNP

Trubripossyt2a VFNETF~~S~~F~~K~~I~~P~~FQEMGGKTLVMSVYDFDRFSKH~~D~~VIGEIKIPMNTLDLAKPIEEWRDL~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIN

Trubripossyt2b VFNETFVFKVPYEELGGKTLVMSVYDYDRFSKH~~D~~VIGEVKIPMNTIDLGXPIEEWRDL~~E~~SADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDACGLSDPYVKIQ

Tnigroviridissyt2a VFNETFSFKIPPFQEMGGKTLVMSVYDFDRFSKH~~D~~VIGEIKIPMNTLDLAKPIEEWRDL~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIN

Tnigroviridissyt2b VFNETFVFKVPYEELGGKTLVMSVYDYDRFSKH~~D~~VIGEVKIPMNTIDLGRPIEEWRDL~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDACGLSDPYVKIQ

Gaculeatussy2a TFHETFYFQIPPFQEMGGKTLVMSVYDFDRFSKH~~D~~VIGEIKIPMNTLDLAKPIEWD~~L~~DL~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIN

Gaculeatussy2b VFNETFVFKVPYEELGGKILSM~~S~~VYDYDRFSKH~~D~~VIGEVKIPMNTIDLGRPIEEWK~~D~~LE~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDACGLSDPYVKIQ

Olatipessyt2a VFNETFTFKIPPFQEMGGKTLVMSVYDFDRFSKH~~D~~VIGEIKIPMNTLDLAKPIEEWRDL~~S~~ADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIN

Olatipessyt2b VFNETFVFKVPYEELGGKTLCLSVYDYDRFSKH~~D~~VIGEVKLAMNTIDLGRPIEEWRDL~~E~~SADQEEPEKLGDICISLRVPTAGKLTVCILEAKNLKKMDACGLSDPYVKIQ

Dreriosyt2a VFNETFHFKIPPFTEMGGKTLVMSVYDFDRFSKH~~D~~VIGEVKIPMNTLDLAQPIEQWRDL~~S~~AEEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

Dreriosyt2b VFNESFVFKIPYEELGGKTLVMSVYDYDRFSKH~~D~~IGEVKLPMN~~T~~LDLGQPIEEWRDL~~S~~AEEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIQ

Xtropicalissyt2var1 IFNETFTFKIPYEELGGKTLCS~~I~~YDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~S~~AEEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

Xtropicalissyt2var2 IFNETFTFKIPYEELGGKTLCS~~I~~YDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~S~~AEEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

Acarolinensissyt2 TYNETFVFKIPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~E~~SAEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

TgutтатаSYT2 AFNETFTFKVPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~S~~SGEKEEP~~E~~KLGDICISLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

OanatinusSyt2 AFNETFTFKVPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~Q~~GGEEKEEP~~E~~KLGDICTSLRVPTAGKLTVCILEAKNLKKMX-----XPYVKIH

MdomesticaSyt2 AFNETFTFKVPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~Q~~GGEEKEEP~~E~~KLGDICTSLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

MmusculusSyt2 AFNETFTFKVPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~Q~~GGEEKEEP~~E~~KLGDICTSLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

HsapiansSYT2 AFNETFTFKVPYEELGGKTLVMAIYDFDRFSKH~~D~~IGEVKVPMN~~T~~VDLGQPIEEWRDL~~Q~~GGEEKEEP~~E~~KLGDICTSLRVPTAGKLTVCILEAKNLKKMDVGGLSDPYVKIH

Trubripossyt2a LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIHAVITVLDYDKIGKNDAIGKILVGSKATGAGLKHWSDMLANPRRPIAQWHPLQPEEEVDAAVAAINAKK

Trubripossyt2b LLQGKGRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIIVVTVFVDYDKIGKNDAIGKIFVGSKATGLGLKHWSMDLANPRRPIAQWHPLQPEEDIDGQLASLAACK

Tnigroviridissyt2a LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIQAVITVLDYDKIGKNDAIGKILVGSKATGAGLKHWSDMLANPRRPIAQWHPLQPEEEVDAAVAAINAKK

Tnigroviridissyt2b LLQGGKRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIIVVTVFVDYDKIGKNDAIGKIFVGSKATGLGLKHWSMDLANPRRPIAQWHPLQPEEDIDGQLASLAACK

Gaculeatussy2a LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPIDQMOKILAVITVLDYDKIGKNDAIGKILVGSKTGAGLKHWSDMLANPRRPIAQWHPLQPEEVDLGAALNAACK

Gaculeatussy2b LLQGKGRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKILAVTVFDYDKIGKNDAIGKIFVGSKASGLGLKHWSMDLSNPRRPIAQWHPLQPEEDIDGQLASLNAACK

Olatipessyt2a LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIQAVITVLDYDKIGKNDAIGKIWVGSKSTGAGLKHWSDMLANPRRPIAQWHPLQPEEEVDASLAALNAACK

Olatipessyt2b LLQGKGRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKILAVTVFDYDKIGKNDAIGKIFVGSKATGLGLKHWSMDLANPRRPIAQWHPLQPEEDIDGQLAALFAACK

Dreriosyt2a LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPQDQMOKIQAVITVLDYDKIGKNDAIGKIWVGSKAQGTGLRHWSMDLANPRRPIAQWHPLKPEEEVDATLAALTAKK

Dreriosyt2b LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPLEQMOKIIVVTVFVDYDKIGKNDAIGKIFGSKASGSTSQKHWSMDLANPRRPIAQWHPLQPEEDIDALAALNAACK

Xtropicalissy2var1 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGCNASGTELRHWSMDLANPRRPIAQWHPLKPEEVDIALGSKK---

Xtropicalissy2var2 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGCNASGTELRHWSMDLANPRRPIAQWHPLKPEEVDIALGSKK---

Acarolinensissy2 LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKVFGVNATGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---

TgutтатаSYT2 LLQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFTGLNSTGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---

OanatinusSyT2 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGCNATGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---

MdomesticaSyT2 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGCNATGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---

MmusculusSyT2 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGSNATGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---

HsapieNSYSYT2 LMQNGKRLKKKKTTVKNTLNPYYNESFSFEIPFEOIQKVQVVITVLDYDKLGKNEAIGKIFVGSNATGTELRHWSMDLANPRRPIAQWHSKPEEEVDALGKNK---