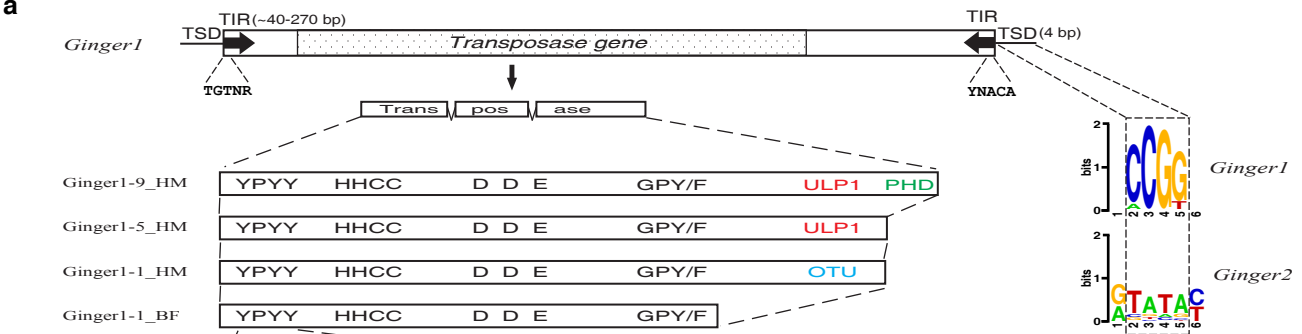




b

Ginger1-1_HM	ADYNNKRIKVIKT (6) SNFRRTKFPVLEEDNEVHLGK (14) LTKSVV DGNDISNEANALSGIINSITEHFK-KRFVFGMFKITAVSECDNOKAKN
Ginger1-3_HM	NDYRKILNDNAFDD (6) KANFKRQCKNEVLEVNKMYCKK (16) LVKEVE EELGTSEKAVASALSLINAVRKOIS-SREFVHSHVDPITKVAQCECCKOIKTSN
Ginger1-11_HM	YDENVNLDSGIFPDH (9) KFNFKKQSPNFWVNGMVKYKR (23) YKRAADGLGTSTESKATGCVRDKTINWKLIDSQVWPMNKNKVRNVVITKTESCKOKSNS
Ginger1-5_HM	EETRQVLEGGKYANT (5) KGLRIARNRKKG-IDGRVLYIRD (15) VLKCCN-----DAGSA-QVIVRQNKIK-NLYVYMSITSCVEALITKQCCSFEK
Ginger1-9_HM	NNVDLIVRGIVY (5) KGLRRKSKRRLV-KDGLLPPYDK (16) LKSCSS-----AILGG-FRDKOLEKLS-ERYVYKGVWVNDXKCYQCDQORANRN
Ginger1-12_HM	MNKKHLLNKVYVPG (5) KRLRQKATSELI-VKDFLVHKKSK (18) LKSMIDG-----IIGCG-FFOSATIAKVT-DRWVPCIAAVKDKVARKCTACAVNP
Gypsy-1-1_P1	AEITADQDSTFESH (6) RKFISMCAKAFSL-SGRMLVYVKK (16) LLEASNQ-----CGRRDATVLRLS-ERYVYPMFVNVSDSEVRSONACOFRSK
Gypsy-2-P1_I	MDEYRLQTMQCF (5) RSVFIHKMSPPEL-KGILFKMGA (15) VIRALSE-----AAGGYALKNVKKILLAGWMPMYKOTHDHISRDACQVRVG
Gypsy-1-1_RO	DLVKQQLQELRLPDD (5) KRYLQQAQHKFET-YDKLYRYNT (16) LMYSYQ-----HPIGGGLAYNNLHKIDA-SRYVYENMTKIMEVVKKCHRCQHRGK
Gypsy-6-1_HM	ADIVSNLANKELPDD (4) KKVLALEGNHLD-ENGLLFHHS (18) LITWAD-----EPCGGFVFTVKYKRIK-TNYYIGVYNDIQTVIKVSTCTAQRRK
Gypsy-15-1_NV	FPYIDULENEVLDD (4) RRLILTHTFTPLS-EDGALYHIDQ (22) VLVINI-----DVTGGGLSGRKIKYDKLK-ARFVIRGMFQDTEHLSVCDNMRKMT
Gypsy-1-1_MH	SLAYBELKRNWDE (3) RCKVINWCSDFET-IBGLYKYEN (15) LLSSES-----KCAGLSGRKIFKPLA-VKLYPMNMGSECSINSAIKRCIAHSRN
Ogre (AY299398)	YDKKNSLKTQVEY (5) KKTTLRLRAGSEYLNQDDVLYKRN (15) LMGEVQ-----SSEGTAGSHAMAKLLRAGVYMMSESCCFKAKCHKQCIYAD
ATHILA01	ADIVNNLVSGMIS (5) KKKFFRDIIHHVY-DEPYLYKKGS (15) LILHGCGS-----TYGGCFATFKLQAKILQAGLVNPPFKQCEI-LAKOPCORVGN
RIRE2 (AB030283)	EPHIRELTSQELPDR (5) RISRR-SKLVMV-HEAEVLYKKSP (15) LLKQISG-----ICGNIAAARTIVGKAYRQGEFPTAVSCADKIVATCGCGOFFAR

c

Ginger1-1_HM	MKQVLDLQ (5) GYVLLVLDYFYSKWE (20) RUCFEIQRDREFVNEISNEHRKTGTRQMTAYAFPCANGLVPCQVOS (14) WPFIDGVLTSMRIRKHKCTCFSEF
Ginger1-5_HM	NAVIGVLDIG (7) GNVVLLITDILFTKNIW (20) TCGPPKKVITDQSEFVLENNKPOLMGIKHSVTAYVPCQSGQDPAITQTF (14) WDSYTSIAIAGLNISQCKSTKMTPE
Ginger1-8_HM	WSTVGLGIC (7) ENMLITATCLFYSKWE (20) RGGCCVEQSSDQSEFVNEVNEKMMGTKCNVTAYVPCQSGDEDFETQTF (14) WDLITESHSEYRVSVQSDKQTPPE
Ginger1-11_HM	MHQVGLCL (6) YVGVGVVYFYSKWE (20) RGGCASIQNDQSEFCNKVSENNLNTGTQQRITAYVPCANGLVERAKTIT (14) WPHSDGDLIFAFRTTRHKSTGTVPE
Gypsy-1-1_RO	EDRALAEVVKH (6) ENRVIAGIYLYLTKYV (21) RGGCPTIISVGNKXPPVSKLQVQCKNFYSIIHKITAYVPCQSGNLEISRT (14) WDSYLPAAELAFRTIKQSGKNTPE
Gypsy-6-1_HM	MDVIAAECLG (7) ENRVIIVFSGCLFTKYV (21) KGLAPRRFTRDSGNKSTLKYVECEILNVKKSSTAYVPCQDFVERINGIT (14) WDVHLPAAVYAYNTSISASTGETPE
Gypsy-15-1_NV	EDRALDAMG (7) ENRVIIVFSGCLFTKYV (21) RGGCPTIISVGNKXPPVSKLQVQCKNFYSIIHKITAYVPCQDFVERINGIT (14) WDVHLPAAVYAYNTSISASTGETPE
Gypsy-1-1_MH	SELCLDILD (6) NSRVIFVAVDHFHSKYV (21) IICAPKRIHSDRCKEELNSHIEINTLTKIEQTVAGDNEANGLVERINQ (13) WPERLPLYELFYNSTPSSTGSPPE
Gypsy-1-1_P1	LRRKFLHITTV (6) GMYLLQAMEPAIGWE (21) RFSCIPVFTCDNCPKEGAV-KYFDKYNICVLVAPYEEAGNVAEAPPTL (14) WPLYLHGALLMRTTSTRMTGYTFY

d

Ginger1-1_HM	DEAYEITQKSVQVRDIDKRV-----NPKNSIAITGVKILRNHNR-----DDRKGGLV-KPIHGGYTTWNISS-TNNSCKNKEKN--VILKKKYLTSLYKEKT
Ginger1-5_HM	KKYVREIKIAQEKQCKQMKKVAK-KGKITFTKINDQVMKLNARK-----RGRKGEPLS-KEMNGSYTADLNI-KGQCTKKNLNG--EILKTKVVSQRLPYYPQ
Ginger1-8_HM	TEVNNIICATKTRMKYKASKQL-KGWKSTKQCDQVLYNRYK-----LGRKGSME-HDMLGGGIELKQ-TGAT--LTING-KVWKAVALSLNMMKPIYVDK
Ginger1-9_HM	KNALQIEKAQEKRAKDAKH-----CSENQLKFKGTQVILKNSKK-----LXRGKSMENPWWGGYKIQILK-KNTFRCONINDCNKKLKQVYMTRLKIYYPS
Ginger1-11_HM	DEVEKILKKSQLRKKDKERKH-----KNQIQIEDEDESVYNLRR-----ADGRKGRGK-SVWDGGEYETFTFDKGLYQKQKNG--ETLTKHYSNMMKLSKRS
Saci-2 (AAC04499)	RLVSKLQMSAEHQKDLDRR-----VHGFPVNVKGDVDRVLRPMA-----SSGSKRFH-QPQWGGYVILIRS-TTFVIRNLQRPQ-DDVITVGNKIPDRMTV
Skipper (AAC39021)	KIVRDLILDAINAPKYLRN-----GRGVDIVVVEGKGVKKRFFQTNLSKDLISHLE-SKNCGEYITAVHG-NNVTLDLVGYPK--K-HNVFQKQVLYDEDS
Gypsy-1-1_RO	DAGVONLQRAQESQKINKILDERKELKPPKGLDITVLYRDYL-----STWSAKLQ-DKMGGEYVQHILG-KGTYHKKSMDFHD-IKLRIIGNMKPYLLPFK
Gypsy-22-1_SP	KLARDLGRSTQRCKNLDLR-----TSVNNVHEGVDVLYRDLSTR-----HKGLSPKLSARMTGCGVCTVTRKLS-ELIFERRSPRG--KPTTILHDLRPFELSAN
Gypsy-6-1_HM	NLAKEILQSAKTKMKHLDDQT-----KSPYQVGHKGVWYTPFIT-----KKGLTKLT-SFWHGGFIRIEKTS-PVTFKLENMNN--KELPTIIVSRLEQWFGYE
Gypsy-15-1_NV	RIAHSLLQKAQKMAAQDRTS-----KPATITVQQRNVWYTPKT-----KKGLSRRLQ-NKTKGEYRTQRLS-DVHFRRTTTN--RPVSVTVANRMKPYPDPA

e

Ginger1-9_HM	KVLLDG-KEITTEHNFALILKKQFPDIDGLDITLL (15) VQILHFINSHVVTSC- (3) GSLSLYDSMYSKLD (30) SVQVGTGSLDCGLFATANAVHL (10) L-NQKFMRLERMFY
MuDr-1_BF	REILQEQDQWNNKHNSAHLISSEYPLIDIGRLDTVI (15) VQILHFINSHVVTSC- (3) GNLYVDSLQPSMK (27) CAQRQGGNDQCGLYAVANAVAL (10) L-QQGMRLFECELE
MuDr-1_HM	FSLKDSFEMSLHNKAKLISMQFPDVKGLQDPIL (12) VOILHNGAMHWLTIS- (7) NSVDVDSGLYDLS (23) DFQKSGGLDCGLFATAAATD (10) L-KQELMDRLKLCFS
Ginger1-4_HM	EILHESKDSNNLNLMDAGKLCALGSHSTYSVLN (15) LOILHDSGSHWLAF- (3) GRVQVDSGLRNLNT (25) FVQKIDSGFNCQGFALGYASIL (10) L-VVNEETRYIKCLT
Ginger1-10_HM	QILHSHNSVSNLMDAOKLQKQGNAPKPSVCL (15) LOILHNGSCHWLTFT- (3) RKVNLDSGLRNS (28) FVQKIDTDSNGGLFVAFAPAL (10) L-DVLKVEMLLLCLK
Ginger1-7_HM	DLKNPSSGDDTLDLIDIASLSYQFPFKISGSVSN (15) LOILHNRNSHWLIS (10) KQCFVYSLFNSSN (28) DVCQVQNGNQNGDGLFALANATAL (10) L-KHNDKRYLYKCLIE
Ginger1-5_HM	ESLLAQ-NMGLIEENAAVILKQFPDIDGLDITLL (13) LOILHDSGLHWLIS- (6) RVVLYDSMKTMEP (24) SCQVGGIDCGGLFATAFVLD (10) L-NQSAQMDLHNCFK
1EUV_A	KTIAP-RRWNTDIEFFMKYIETKSTPNVAFNSFFY (29) TP-HNLNQSFWAGSI- (5) KTIQVYDSLSNGPN (31) DVCQVQNGNQNGDGLFALANATAL (10) L-KHNDKRYLYKCLIE
MuDr-4_HM	NDELNTN-QMSIVHMTKMT-----GVGGLDPLV (13) VOILHDSGDAHWLTIS- (6) GEVPELQDSFFRGKV (24) FVQVQVQNGNQNGDGLFALANATAL (10) L-KHNDKRYLYKCLIE
MuDr-4_ZM	-----VPLMR--SHWTIYA- (5) RRDIDDSNPYGT (57) CPTMTPFGSNDGCFVAFNLFY- (9) L-YTPVYV
MuDr-5_ZM	-----VPLMR--SHWTIYA- (5) RRDIDDSNPYGT (57) CPTMTPFGSNDGCFVAFNLFY- (9) L-YTPVYV
VANDAL20	-----VPLMR--SHWTIYA- (5) RRDIDDSNPYGT (57) CPTMTPFGSNDGCFVAFNLFY- (9) L-YTPVYV

f

Ginger1-9_HM	AGQFKPFFHLNKRSLNITRNSSAVNVNLCSTGLMPCT-YFMVACQCKPKEHKKVYMK-----DNVY-----QE-NNCKSICKLS
MuDr-1_BF	NKAIKMFHDTKVGQAN-----TVSVSYQLTYTCHE--HRPGSPMIMGDCAKAWYHSCVNL-----DEHYALVLTGDDVCHTCHSD
MuDr-1_HM	DNYLTPTFETIETNRKKK--KQPKFINPLVIGLRLPDNKE-KMVKKDCCKEWHVYVCLSKN-IFDNDSD-----NSLHNNKNSGS
Ginger1-4_HM	DAHLYPFTLEKADVIL--CNPKPLKFI
Ginger1-10_HM	SQYLSPEFKKKIN
Ginger1-7_HM	NGKLEMPFVTVDLGHG---RCAFTIDCNHCKRQKNNN
Ginger1-5_HM	AKHFTSPERSYSESTVN-KCESSTIFNVV

f

Ginger1-1_HM	HNVAVGNNILTLTGQLHRIKLDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Ginger1-2_HM	KNIPIADINLLSRKQIHKHTIDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Ginger1-3_HM	PDLFDGEEN--DVSKIHVCKDGCNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Ginger1-1_AC	PMQDRPESNNHLSGNNNTSVSDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Ginger1-1_AP	QCVAXKSYKRLSKGQCTIDVIDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Helitron-1_SP	SKSDIDTCINIGTAAISINISDGCNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Helitron-2_SP	CDRLDRNCSIGVLSQKQITSDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Helitron-1_DR	VHVQVAMKSLGVCKTKTSKIDGNCFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
3BY4_A	SHYNTSGGSGENVLVHPVLDNCSFFRVRVFTITGSDEEIKCQIRKQVKN-HCNQ-IHDEMGTGLSMPTQTHCKTRMTEDATNAADLIGCSFSEVDFQVSKYEKTKMILPC
Ginger1-1_HM	SLRLN---KLS---DYSIFLDNSTGFIDVINS-----
Ginger1-2_HM	SLTLT---QLS---EHAIFLDNSTASINVULL-----
Ginger1-3_HM	SMKLD---QLT---AHSILLEN-KNNHNVNLSKAL-----
Ginger1-1_AC	DFSSG---NLSQSKSENPAIYLTNLCAHERVGVGEH----
Ginger1-1_AP	DGSKYDGTNPN---ENCLYSHVNRNHOVIEIE----
Helitron-1_SP	NNPGRIVHDSN---MGIVLHVKGHDYVESVNCISDV
Helitron-2_SP	KKPGRINIVTSD---KGIYILVTGNVHNVESVDFVFNV
Helitron-1_DR	NNELFT-----ENSIYLYKHONGNEVTVCKVNGSQE
3BY4_A	DK-----FDNYILFLNGLIDSDTMMNEPKT---