

S4 Table. Protein sequences, identified domains and genomic locations in VectorBase of NMRI and BS-90 *Biomphalaria glabrata* VIgL domain-containing plasma proteins eluted from larval transformation protein (LTP) affinity columns.

Protein ID	Scaffold No.	Predicted Protein Sequence
<p>FREP 2.28 [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: ADK11410</p> <p><u>Domains:</u> -Signal peptide: 1-20 -Ig: 38-148 -FBG: 181-382</p>	<p>500-1158: LGUN_random_Scaffold563550: 640-1300; rev. frame; 1994bp LGUN_random_Scaffold9301: 368-1028; 12407bp 199-502: LGUN_random_Scaffold534902: 1310-1613; 1684bp</p>	<p>MASLPLRLVLLVSMVTLIRSSSWLNFTGNSETIRELIQPLKLTCTFQISKNDSEENDSQVLFMSIYHETKRVIASISK YQPVATSLYPSVTKVQGGQIYHSNESKDSYLQVTWTHPKLSESGKYFCLAHAWNSTSQNSVFDADITVNVIKSST DDLAVALSYIQDRLDKDGVDSIQISRASPTLPESCRDVISSDRVVVTLASGLKVMCDTKTDGGGWIIFQRRING YVDFYRGWKEYRDGFGDYDIGEFYLG NENIFKLTSSKKYDLRIDLEFNNTKYFAFYTRFEILGEQDYKLGIGGYS GNAGDALTNIHNDKFFSTYDKDNDLGTSGSCAVTHKGAWWYRDCYDSSLNGKWGSDRINWSKLTGITKSVT FTEMKIREIELN</p>
<p>FREP 3-2 precursor [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: AAK28656</p> <p><u>Domains:</u> -Signal peptide: 1-18 -Ig: 28-134/183-301 -Coiled coil: 314-382 -FBG: 451-655</p>	<p>LG3_random_Scaffold2841: 18324:26062; BGLB000204; 253aa/ 655aa; 65764bp</p>	<p>MARLFLFILCVFVVS LAGSELVIDVQPNVISPEITPQLVINCSITNNEVQTLDLIKSLTSLRYNETIREFDELIALDSL TLNLKQFVRFKYSQISFGNRYITLILHNPTQFDARIYKCNATGTNSEGANISLFAKKA VEYETNSTALIEEIRRIKDD ENYCSFKKDDLSDSKQRSRVYFSGSSDIKERIEPLTKCTFQVLKTDQNETSRLQSLYLHESKGVIAVYVNDKQPV VTSLQGSNIQDVEGEIYD NAIKDSYLQVTWSNLKHSESGKYFCEAHNKYSEGRIDKSSNMLTITVERPTFDDLVE AMHKLFTQVDGAKESLKAINQNIKNINKDLDFKEQNITSIKQEVIRNQNNIQLSEDLNIKEQNLTSIKADLSTKQ QTFLNIKEDVILNQIIHKIKQDLNTYRHNMSNIEEHLEVILTNLSTASIKVKNQTDEGSKMSYPPRKRCDVNS TDERVVVTLTSLGLKVMCDTKTDGGGWIIFQRRINGNVDFYRGWKEYRDGFGDYDIGEFYLG NENIYMLTSTG QYNLRIDLKYNKAFFAQYSGFKILSEKEYKLNIGAYSGNSGDNFSSHNAFFFTFDRDNDEYSYNCAVDYTG AWWYHSSCLNCNLNGKWGSSDFAKGVNWDLSRFDSSVSFTEMKIREI</p>
<p>FREP12 FBG variant 2, partial [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: AAT58639;</p> <p><u>Domains:</u> -Ig: none; C-term seq only -FBG: 1-128</p>	<p>LGUN_random_Scaffold1434: 56555:64579; BGLB000011 (86%) LGUN_random_Scaffold2702: 15650:23178; BGLB000021 (86%) LGUN_random_Scaffold4104: 4421:17121; BGLB0000133 (85%)</p>	<p>TKTDGGGWIIFQRRINGKVN FYRGWKEYRDGFGDYDIGEFYLG NENIFKLTSTGQYDLRIDLEFKNTKYFAQYE DFKVLSETEKYKLQIGDYLG NAGDDLSPHNMFFSTFDRDNDVDVSHLNCAEYCS</p>
<p>PREDICTED: ficolin-2-like [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013071685;</p>	<p>LGUN_random_Scaffold11134: 377-790; 2673-3506</p>	<p>MLIVTVATATFDDLKVIQKLMQADEDEKEIQENKQKINIQEDFDTRQQNLSPFKDILVNGKKDYKEMNTSD SILPDRPCNVNSTKRRLVNLASGLKVMCDTMTDGGGWIIIQRRIGGMVDFNRDWQEYRDGFGDYDIGEFY GNENIYKLTSSGNYELRVDLEINYSFYALYSKFQIMNESNKYKLKISGYLG NATDSLAWHDNLNFSTYKDNKN NIPNCLFKYPGPGGWWFAGHGSNLNGVWRSRFRNQINWYGLTGYKSAYFSEMKIREKY</p>

<p><u>Domains:</u> -lg: none -Coiled coil: 12-53 -FBG: 71-280</p> <p>PREDICTED: Fibrinogen C domain-containing protein [<i>Biomphalaria glabrata</i>] (50%); Sequence ID: XP_013072469.1</p>		
<p>PREDICTED: angiopoietin-4-like [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013069966</p> <p><u>Domains:</u> -lg: none -Coiled coil: 97-192 -Internal repeat: 202-286/ 286-363 -FBG: 403-563</p> <p>PREDICTED: Fibrinogen C domain-containing protein [<i>Biomphalaria glabrata</i>] (47%); Sequence ID: XP_013093995.1</p>	<p>LG3_random_Scaffold99:2047-3202; 5313-5785</p>	<p>MYIFHETNGVIATINKGQTVVTAIQEVGSNNVKGELSDEKLHESYLQVTVWRNLRSSDSGKYFCGAHVIGSDGR AERLNEMVTIQVKLPTEFDLVNVIQKLLIQANDDREILQDNKQNIKSIQNELRNNQDNVIKMYKLDNHEQNF IRIKKDLDSNQQNIKIINQDLNQQQNIIRINTDLSKEQQFTRFNKDLDSKQQDIIRIDKDLNATEHNITRINKDI DSKQQDIIRIDKDLNATEHNITRINKDIDSKQQDIIRIDKDLNATKHNITRINKDIDSKQQDIIRIDKDLNATKH RINKDLDSKQQNIIRIDKDLNATKHNITRINKNLDKQQDIISIKQDLESSKDFNEHRQNISIFKDILDTVIYNLSS SLTDVKQELTKELSDGIKICISGHIHAASCRNRSSDYYVFLVLLPSGLKVMCDTKTDGGGWIIIFQRINGKVN FYRGWEEYRGGFGDFDIGEFYLGNEIFKLTSTGQYDLRIDLEFKNTKYFAQYEDFKVLSETEKYKIQIGDYS GYAGDDLSPHNNMFFSTFDRDNDGQKKISTVHKVIKNQENLISDSK</p>
<p>PREDICTED: Fibrinogen C domain-containing protein [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013072469</p> <p><u>Domains:</u> -Signal peptide: 1-19 -lg: 27-141</p>	<p>LGUN_random_Scaffold1199: 57142-57604;61307-61835; 65995-66891</p>	<p>MAHMOVHLLTCVVVLSLSSSELIIDVRPDIISLEITPQLVINCSITNNKVQHLDVMNSLTLTRYDKTIRDFIALITLDS STLNLKQLTKFSNSQVSGFNLYLALTLHYPTQFQDAKVYRCSVNGNANGTDVSLSAKKGVEYETNSTALIEEIR LKKDEDTYKCSFKKTDPRGSRVHFFASSEIKERIEPLTNCSEFQVSYLFIHNFVNNMSTPEAYETVEHILYEYR MLRNTIEDTTSFETERTGAWLGLTLTYGDKRTLQNTGRDLVETNGVIATINKGQPVLTTHGGHSNSRNAKGEIF DNEKDSYLQVTLNQLFSESGKYFCEAHVKRSQGGVERLNKMLAISVLSPTFEDLVKVIKVLKRSDEDNIRIRE NGQTLRNIQEDSDTKEKNIKSIEDLNTKQQNIISLKEDFNAFQRTMNTFREKLEVISANVSKIERERTEDKEIAS CREVKTREERVVVTLASGLKVMCDTKTDGGGWIIIFQRRTYGIIVDFYRSWQYERDGFQVSDVIGEFYLGNEIYN LTSSAKYDLRIDIKYNRNSYAAQYSDFQILSEKDKYKLGIGAYSGNAGDLSYHNNMFFSTYDKDNDLYGSNCAT NYLSAWWYNSCHNSNLNGQWGSKVNSNGVIWNTLTKEGASFTKIREK</p>

<p>-Coiled coil: 383-450 -FBG: 452-627</p>		
<p>Galectin-related protein precursor (GREP) [<i>Biomphalaria glabrata</i>] (100%); SequenceID: AKS26835.1</p> <p><u>Domains:</u> -Signal peptide: 1-20 -Ig: 28-133/208-325 -Gal-binding: 473-610</p>	<p>LGUN_random_Scaffold_18083: 2985-3023; 2124-2167; 2738-2840; 1688-2124; 624-705; 123-183; LGUN_random_Scaffold_47310: 864-1192; LGUN_random_Scaffold_120741: 407-476; LGUN_random_Scaffold_5606: 17851-18203; 15817-16198</p>	<p>MKRLLLPLLLTSLQGSLELIIQVNPGLTSPGLTPKLTVNCSSINESVAELNAIQSLMSRYNETSKTFDVLTYIDK ETLSLKQIVELKGAQISFGNLFILLTIPSPSQYDCQTYSCIANGYNKFGNND SISTKVKVESRTNITEYIKEINRLKKL EANSIMEDNVPLKNIEKLILANMNIQMCSLT TNKTS EDLIEKATLHFSVNSKTIKEFLEPMIMKCTFQVSKNNAS QNLTVHYMYIRHETNGVLATISRDQQVGISQDTSLSQVQGLSDQDFNISYLQVIWIKPSPSQSGKYYVCGANI VNQEGQLEKLKASLEITIEKTSLEDLVPIVIDLLAERTKVRHILEASMKEVIEIKQVRS AVIENVRLINQNSSTSFV LFSNIEFGCKPNHTSQIKTLAINCLRNVHCAALMCAKDLTCTPCDRSAISGLRFPDHGSEMYLKRSLVLSQVEK RLPPVLVLSSEIAVPSGLRAEDLIYFRVTLLKYYDNFYIDLYEDNYNINYQFRARCD DDQCSIKGDCSESDCKSKFVT IGSKTSGFWSRSFVTRDYPVFLNEEFEMYLIIHQDSVDVYIKDKLFANIKTPRKPEDVRVIQFGGTIVLHELSL</p>
<p>PREDICTED: Uncharacterized protein LOC106063810, partial [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013077728</p> <p><u>Domains:</u> -Ig: 1-73 -lectin domain: none (N-term seq only)</p> <p>Galectin-related protein precursor (GREP) [<i>Biomphalaria glabrata</i>] (96%); Sequence ID: AKS26835.1</p>	<p>LGUN_random_Scaffold18083: 1688-2120; 624-705; 75-186;</p>	<p>MSLYNETSKTFDVLTYIDK ETLSLKQIVELKGVQISFGNMFILLTIPSPSQYDCQTYSCIANGYNKYGNND SISTKV KVESRTNITEYIKEINRLKKEANSIMEDNVPLKNIEKLILANMNIQMCSLT TNKTS EDLIEKATLHFSVNSKTIKEL LQPMIMKCTFQVSKNDASQNFVHYMYIRHGKNDTTIHWRIQEGGG</p>
<p>C-type lectin-related protein 2 precursor, partial (CREP2) [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: AKS26832</p> <p><u>Domains:</u> -Ig-like: 15-132</p>	<p>LGUN_random_Scaffold35213: 1403-1468 (98.5%) LGUN_random_Scaffold34937: 746-1051 (71.9%) LGUN_random_Scaffold205317: 1-272 (98.2%) LGUN_random_Scaffold46202: 1045-1228 (100%)</p>	<p>FRELDLGSRLTFTGNSETIKEIFEPLILSCSFQVAKHDVKENGVILMYIFQETKGVIAITISKGQPFAYSTEPRHTFA QGNIGDEKLNKSYLQVTRKNPNSLESKYFCLAHVRDSAGKDKV FHASIKINIEKSN SDDLVPALGRVLERLDRI EERQEATEQKIVDAQEDFNIQIGNLSSVLDQEKPKKEEDNVLCNAGFHKITDGOISACVWVSNVSMNYIQAR DDCKEKGAHLLTLKTEKFTLLHKNDPGRYLWIGLTDRLIEDIFKWDDNSICNPLCRGRLFSTGEPNDSGGEE DCVVYYPTRMKLNDNNGCSTNHYMCEHPI</p>

<p>-Coiled coil: 142-174 -C-lect: 196-325</p>	<p>LGUN_random_Scaffold113935: 1-178 (97.8%)</p>	
<p>C-type lectin-related protein 3 precursor, partial (CREP3) [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: AKS26833</p> <p><u>Domains:</u> -Signal peptide: 1-19 -lg: 29-145 -Coiled-coil: 226-251 -C-lect: 261-360</p>	<p>LG3_random_Scaffold2051: 76877-77044; 74469-74550; LGUN_random_Scaffold38320: 919-1386; LG3_random_Scaffold2051: 66872-67025; 63650-63835</p>	<p>MKTLHLVLALCAFIIVTLVLCSSPTVFTANSETVKEQFQPLILSCSVKVSNGNEPIQDANVHLLYLHETKRIIARISKD QPVGTSQNPQSIQVQGGQINENKAMHSYLQVTWTPKFTDSGKYFCLAHVRNSTGQDNVLDADITINVGKLT TDDLTMVVSRLRLERVDEGEVKQEENRQNILSVEEDLTDRLVNTTIVVSRLRLERNNGEEKQDENSRLKLMEEY VYNLIANLSRIQEALNQNIKATLKMETTTITTSRGNCKRGFDKITYGQLFACVWVSSAPLDFFGARDSCALGA RLMTLKTDRKFNLETTNNVGNKEFYIGLDFVTEGIFRWTDDDSISNLSSIQSFFRTGEPNDHAG</p>
<p>PREDICTED: Uncharacterized protein LOC106065543 [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013079834</p> <p><u>Domains:</u> -Signal peptide: none -lg: none -Coiled coil: none -C-lect: 144-283</p> <p>PREDICTED: C-type lectin domain family protein [<i>Biomphalaria glabrata</i>]; (36%); Sequence ID: XP_013081459.1</p>	<p>LGUN_random_Scaffold20861: 821-2283</p>	<p>MLKINSLVLSRVTSADNDTIEELIILNYESNNTSKTSKNPKGSIGFNGASYVSLTWPNPSPYRDASKYKCEARGV STSFNKISAAAYASVETDEPDIRSLVDELLHLRKETYETSNSLKEVKQKYASLNEVLQKSVNKLNAEKQLSKNSFFI SSNVFQGGKRYMSRKQASNDINKAQATCAFYGGYLVEIDTTDEYTFVNVNFIKSVSANDSTFSCVYNGLMDPEN DGIWTHVFTKKDSKFLPWGKGEPQNTADYNMCMCLEKSYNWRYNDLPCYYADALRY LCEIPEDEQTVSN</p>
<p>PREDICTED: Uncharacterized protein LOC106062883 "CREP-Like" [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013076651</p>	<p>LGUN_random_Scaffold16778: 502-660; 1390-2477</p>	<p>MITIPCVFLCVLYAVSWAATIDIKPNVITVPVTRNLVIVCSLKRVNTPELSALFSLTLLHSNAMDEPKFTSLASVN TLDNKISTFSLDESATVAGLINNSGESFLRLTKNPMSEKSGLYRCSFNGVGLGNPLTLTSTGAVVSVTDYD SLTDKMKDFENSSKELKAKFDILSDYTNLHTNYNSLISRLSRSDAAFYSTSSFNRSRYLPRDLQVLTWQAQ ATCELYGGHLAEIDSNEEFHFVRNFLVSKNLFDVVVTGANDEEKEGTWIYNRNKAPLKVFNWATTEPNSGRIA NCQCFWKGGNWMADARCVYFNNKPNPDGYVYSYLCEMPESSTDV</p>

<p><u>Domains:</u> -Signal peptide: 1-19 -Ig: 26-148 -Coiled coil: 148-176 -C-lect: 199-335</p> <p>PREDICTED: C-type lectin domain family protein [<i>Biomphalaria glabrata</i>] (32%); Sequence ID: XP_013081459.1</p>		
<p>PREDICTED: Uncharacterized protein LOC106062128 [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013075857</p> <p><u>Domains:</u> -Ig: none -Internal repeat: 1-64/ 57/120 -C-lect: 1-61</p> <p>PREDICTED: Techylectin-like protein [<i>Biomphalaria glabrata</i>] (89%); Sequence ID:XP_013089083.1</p>	<p>LGUN_random_Scaffold6870 :6587:15188: BGLB000131 (91%; 147/156)</p>	<p>MNSTKQDIISLKDNMNSTKQYIVSIKKDLDTTQANMKSLNEDFYTNIQNITSIKKDMNTYKENILRIETDLDSNK QNIVSIRKEADTNKQDIIRIKEDLDTKQQNMLSIRENVDTNRHNMSIFQENLTMVMANLSTELKEVQSQIHKD PRKMGELE</p>
<p>PREDICTED: Uncharacterized protein LOC106065054 [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013079269</p> <p><u>Domains :</u> -Signal peptide: 1-20 -C-lectin: 36-165 -EGF: 170-212</p>	<p>LG4_random_Scaffold311: 172599 -172997; 177150-177253; 177834-177972; 179067-179206; 182629 182787; 183969 -184116; 185191-185348; 187829-187984; 191164-191717</p>	<p>MLFLKLVTLVLLYKCNKVLADDDTPAETQSTVNWYCPEGWTFNDGHNITCLWFSNTSLYQVKAQTICKNFG SSLVKLHTEDKIKAFKENFSLENDIYGLRKERGYDASYMWDGINGLEIANISILPTSVKDSIHYKLSCVYINTQG EWDIDDCETEYNFVCEKSVECKPGSFGDKCFNQCHCLGEPKNPKSSEIRCKYGCQTGWMGNACDLEKQDPD VKYYCVNSQEKGKYVNIRIYTKGVHYRSIYGLNVNKRSPWCYSSISEDIDSSLPVTITIPVKEELQEVLESGSCA GEHLSNDTYLWTVVIKENEGILLEHDLQVTIKCDFSKSELRNSAYSVIGQPTLHKQFLEPQSTEDDVSMQVV DSYSGQVISEAAVGSSVTLTIKFGLKEGSLIKGITPYDCYATSPDNKFKKQLIDSQGCPMSGSPISAFSERDDNSI QTQWFPLFAFEGEQNVVFCQSFDCFLKGCQVGCRAFRFHKRS AEDYPETLHEHFTKSTIAVLANKIPISMPES ESADNNSLSKSSQTPKSSNILAYFNPTCSIFLVLLVLIIVTYMSFMYALRKS VGNIRREIDYVISRDKLLCYGKIPK DKNCDNCNCPYNC</p>

<p>-ZP: 262-474 -Trans-membr: 549-571</p>		
<p>PREDICTED: Uncharacterized protein LOC106061984 [<i>Biomphalaria glabrata</i>] (100%); Sequence ID: XP_013075688</p> <p><u>Domains:</u> -low complex: 25-37/ 58-72 -Ig-like : 88-206 -Coiled coil: 216-276 -Lectin domains: none</p> <p>PREDICTED: Fibroleukin-like [<i>Biomphalaria glabrata</i>] (45%); Sequence ID: XP_013070005.1</p>	<p>LGUN_random_Scaffold15796: BGLB005673 (100%)</p>	<p>MHYRNINCQTANLHFISEFPARLVTTTTSSSTPETTTKILSTKIEWYTSTTAQPKIKTTSTVTMKQPMTTTTVNIS SPPE SRLQYGSSEIIQELIEPLTIKCLYKTLIQGERDTSALQSLYLLHETNGVIAYINKQQPVIATIQQDNFKNVEGE IFDNESKDSYLQVTWNDLKRSESGKYFCEAYVNHS DGRFDKMNEMLTIIVKSPTFDDLKVIQKLQRQAEVDK ETVRENQHKIKTIQEDLDTKQQDIISLKEDMNTTKQDIMSIKEDLDTKSQNILSIRENFDTNKHNMIIFQDNLT MTVANLSAALMEVENS GKVFTFYIISLYSLCEAYILN</p>