

Drome-E75 MEAVQAAAAATSSGGSSGVPVGGSSGASKLKTEPIDFEMLHLEENERQQDIEREPPSS  
Tal-REVERB -MGSTSSDAGVPLISSTQDGDNRITIGHSTNKLQRGREFVQNIFFPYTLKTDDIVRATSSD  
Blage-E75 -----MTDTKDFRIPTSVI  
Apido-E75 -----MSADVARD-----  
\* .

Drome-E75 NSNSNSNSLTPQRYTHVQVQVPPRQPTGLTTPGGTQKVILTTPRVEYVQQRATSSTGGGM  
Tal-REVERB DRKFDFAYSLADGSQAGIIASSTMHSHKNG-----  
Blage-E75 A-----  
Apido-E75 -----

Drome-E75 KHVYSQQQGTAAASRSAPPETTALLTTTSGTPQIIITRTPSPNQHLRHRHSASPSALHHYQ  
Tal-REVERB KSIYYPPEEKIKIKQEPSEYADLQSQATSVLHMKGFEFDSKVGHVKQEKKEDFARWWKN  
Blage-E75 -----  
Apido-E75 -----

Drome-E75 QQQPQRQQSPPPLHHQQQQQQHVRVIRDGRLYDEATVVVAARRHSVSPPLHHHSRSAP  
Tal-REVERB DDDEKPLKSEPMKQGRDEDMM-----PPPKG-----  
Blage-E75 -----PPPL-----  
Apido-E75 -----PSEM-----  
\* .

Drome-E75 VSPVIARRGAAAYMDQQYQQRQTPLAPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP  
Tal-REVERB -----PPSSSLGNIHRFSKPGKHHKIQDFRKNFPGAQY  
Blage-E75 -----  
Apido-E75 -----

Drome-E75 AARKFVVSTSTRHVNVIASNHFQQQQQHQAQHQHQHQHQHQHQHQVIVASVSSSSSSSA  
Tal-REVERB LPSYPNITDVSRFSPVVSSEMWHAVVSSYRMSLDQRAMYETEGAP-----  
Blage-E75 -----  
Apido-E75 -----

Drome-E75 IGGGSSSSSHIFRTPVSSSSSSNMHQQQQQQQSSSLGNSVMRPPPP-----P  
Tal-REVERB -----SSSSVELAKSSSDAQEPSSSGLHAPKSTKPEANIFTVKKNQP  
Blage-E75 -----VSSSTCXPPGTASSTMRPPPP-----P  
Apido-E75 -----VDHTTTTRNGV-----P  
\* . \*

Drome-E75 P-PPVKHASSSSGNSSSSNNTNNSSSSSNGEEPSSSIDPLEFDGTTVLRCVCGDKASGF  
Tal-REVERB P-PANVENFYQTH--GTSGRKAAHTRRDENIVSSSIDPLEFDGTTLLCRVCGDRSSGF  
Blage-E75 P-PPKARS-----NGVAGGCDVKSERNHHEEPSSSIDPLEFDGTTVLRCVCGDKASGF  
Apido-E75 IYPIEVCE-----ATIAVNETQNPERRH-----LRVKEFDGTTVLRCVCGDKASGF  
\* : . . : \* : \* : \* : \* : \* : \* : \*

Drome-E75 HYGVHSCEGCKGFFRRSIQQKIYRCPCTKNQQCSILRINRNRQYCRLLKCCIAVGMSRDA  
Tal-REVERB HYGVHSCEGCKGFFRRSIQQKIYRCPCTKNQQCLVQKTNRNRQYCRLLKCCIEVGMSKDA  
Blage-E75 HYGVHSCEGCKGFFRRSIQQKIYRCPCTKNQQCSILRINRNRQYCRLLKCCIAVGMSRDA  
Apido-E75 HYGVHSCEGCKGFFRRSIQQKIYRCPCTKNQQCSILRINRNRQYCRLLKCCIAVGMSRDA  
\*\*\*\*\*:\*\*\*\*\* : . \*\*\*\*\* \*\*\*\*\* \*\* \*

Drome-E75 VRFGRVPKREKARILAAQQSTQNRGQQRALATELDDQPRLLAAVLRAHLETCEFTKEKV  
Tal-REVERB VRFGRVPKNEKERIRQAMEKASSNIPQDY-----NDDFLIQSITRSHLQSSAVANENM  
Blage-E75 VRFGRVPKREKARILAAQQSSNSRSQEKAVAAELEDEQRLLSTVVRALHDTCDFTREKV  
Apido-E75 VRFGRVPKREKARILAAQQSSHSRSQEKAVAAELEDEQRLLATVVGQHLDTCDFTRDKV  
\*\*\*\*\*.\* \* \* : : : \* : : \* : : . : \* : . . : : :

Drome-E75 SAMRQRARDCPSS-MPTLLACPLNPPE-LQSE----QEFSORFAHVIRGVIDFAGMIF  
Tal-REVERB REIIRTSEEHPQVANIDPISDCPLNP---YVGT---EDFOKQFSPIVRDVVAFAKNIF  
Blage-E75 EPMLARARDQPSYTACPPTLACPLNPNPQPLTGQOELLQDFS KRFSPAIRGVVEFAKRIE  
Apido-E75 APILVRARETPNYTACPPTLACPLNPNPQPLTGQOELLQDFS KRFSPAIRGVVEFAKRIE  
: : : \* : . \*\*\*\*\* . : : \* : : \* : : \* : : \*\* \*

Drome-E75 GFQLLTQDDKFTLLKAGLFDALFVRLICMFDSSINSIICLNGQVMRRDAIQNGANARFLV  
Tal-REVERB GFSDIKHDDKITLLRACVFEVLLIRFARLIDAKNRRMITISGYIINASIYANIKTSNDFE  
Blage-E75 GFALLPQDDQVTLKAGVFEVLLVRLACMFDAQTNSMICLNGQVVKREAIHNSNARFLM  
Apido-E75 GFSLLAQDDQVTLKAGVFEVLLVRLACMFDAQTNSMICLNGQVVKRESIHNSNARFLM  
\*\* : :\*\*\*:\*\*\*.\* :\*:\*:\*: :\*:\*. . :\* :.\* :.. . \* .. :.

Drome-E75 DSTFNFAERMNSMNLDAEIGLFCIAIVLITPDRPGLRNLELEIKMYSRLKGCLQYIVAQN  
Tal-REVERB NTLFTFVDRINTLLKLSDEEMALFSAIVINPKRQGLHELKSVSSLHKRIVHCLQVIMQRE  
Blage-E75 DSMFDFAEERLNSLRLSDAEVGLFCSVVVIAPDRPGLRNTELIERMQGLKKAALQMVSQN  
Apido-E75 DSMFDFAEERVNSLRLSDAELGLFCSVVVIAADRPGLRNTELVERMHNKLRNALQTVLAQN  
: : \* \* .:\*\*\*:\*\*\*.\* \* :\*.\*\*\*. : :\* ..\* \*\*.: . :. : . : . \*\* :. : .

Drome-E75 RPDQPEFLAKLLETMPDLRRTLSTLHTEKLVVFR-TEHKELLRQQMWSMEDGNSSDGQQNK  
Tal-REVERB RPNDFSLCQDLLSTLNDLWILNGMHS-----KQTQAKQKGSNSDCDGRMDVSGP  
Blage-E75 HPGHANI CHELMKKIPDLRRTLNLHSEKLLAFKMTEQQQLQQQQQQHLLWGTSPPEESNS  
Apido-E75 HPQHPDILRELLKKIPDLRRTLNLHSEKLLAFKMTEQQQMQAQQQQHQ-----  
. \* .. : .\*:...: \*\*. \* . :\* : : \* \*

Drome-E75 SPSG-----SWADAMDVEAAKSPGVSSTESADLDYGPSSSSQPGVSLPSPPPQQQPS  
Tal-REVERB QTEGFSSQYPCYSDYPEVRCGPMRYSNAS-----EYDEK-----RAPMEEQTS  
Blage-E75 KSPAGSSSSWSSSDVTMDEAVKSPGVS-----STESVCSGEVASLTEYQPNHHPVS  
Apido-E75 -----

Drome-E75 ALASSAPLLAATLSGG-CPLRNRANSNGSSGDSGAAEMDIVGSHAHLTQNGLTITPIVRHQ  
Tal-REVERB QTSPTSPSSSTFCPDEEMRSPGSADSGCSTDSGCSIESGCSSDSG---CSMNIASN----  
Blage-E75 HQASSAPLLAATLAGGICPHRHRANSGST--SGDDMSGLPHHS---HGLTITAV----  
Apido-E75 -----

Drome-E75 QQQQQQQQIGILNNAHSRNLNGGHAMCQQQQQHPQLHHHLTAGAARYRKLDSPTDSGIES  
Tal-REVERB -----DHARSTLLSDEPR-----ETMSVPDETTER  
Blage-E75 -----NPPSRQQPLMPQHHRFQ-----RKLDSPSDSGIES  
Apido-E75 -----

Drome-E75 GNEKNECKAVSSGGSSS-----CSSPRSSVDDALDCSDAAANHNQVQHPQLSVVSVSPV  
Tal-REVERB FRKCYIKRKPN-----VEESRIPEK-----  
Blage-E75 GTEKLDKLTSGGGSTGSAPTVCSSPRSSLED-----  
Apido-E75 -----

Drome-E75 RSPQPSTSSHLKRQIVEDMPVLKRVLQAPPLYDTNSLMD-----EAYKPHKKFRALRHR  
Tal-REVERB GRPMTWHKPQKESEKLADSPVLRMCLEAPSTLKMDSFKDVYRGHSAHSHPHKKFRPTVDR  
Blage-E75 KDEEKHHNGSSGSSHIDDMPVLKRVLQAPPLYDTNSLMD-----EAYKPHKKFRACRKN  
Apido-E75 -----

Drome-E75 EFETAADASSSTSGSNSLSAGSPRQSPVPSVATPPPSAASAAAGNPAQSOLHMLTRS  
Tal-REVERB -----SGHPHETLDYSHSSRPSTTPSPSYSSSPSSSISSPSRIS----SSPY  
Blage-E75 -----DSAEAEPMIVHVSPPPSHPVPPQHHSFQLHLHLTSNNHQSQ----SSTS  
Apido-E75 -----

Drome-E75 SPKASMASSHVSLAKSLMAEPRMTPEQMKRSDIIQNYLKRENSTAASSTTNGVGNRSPSS  
Tal-REVERB SSSSSSNPSSPANVSILAHRLAMPCKKFKPCTLVQSLVQSLQESK-----FGTGKALV  
Blage-E75 STSSLSSTHSTLAKSLMESPRMTAEQLKRTDIIHNYIMRADSPNPVTIEFPPSAPSPSA  
Apido-E75 -----

Drome-E75 SSTPPPSAVQNQRWGSVITTCQ-----QRQSVSPHNSGSSSSS-----  
Tal-REVERB SDTLHDCIMNDQSKIQRQHVLATASPS-----RYDCGRNSSPLRSQSYMSSP-----  
Blage-E75 NSASTTSTSSYKMNNSGNLLVCANSTPSTGYHYIPQIQPQQQQQTVVGRWQSGPFGSNGA  
Apido-E75 -----QQQQQTQHVINVGW-----  
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Drome-E75          -----SSSSSSSSSS-----TSSNCSSSS
Tal-REVERB        -----THSMTSPPPH-----D--DVPPHS
Blage-E75         SVITTTTGRNPTPQQTYVLLQNSTNISPPVHHAEMQQSEFSRIYFHPGNAVSPHAAAASS
Apido-E75         -----

Drome-E75          ASSCQYFQSPHSTSNGTSA PASSSSSGSNSATP-----LLELQVDIADSAQPLNLSKKS
Tal-REVERB        YSSPIPVAHSSPSHTPTGLGASAMSGCNFSSS-----YICDNAEPLNLSKKT
Blage-E75         STSPSPPLPIPHRKTPPAVASCPPSPSSSGVTPIVISSPKMMELQVDIADSQQPLNLSKKS
Apido-E75         -----

Drome-E75          PTPPPSKLHALVAAANAVQRYPTLSADVTVTASNGGPPSAAASPAPSSSPASVGSPPNG
Tal-REVERB        PSPPPA-----
Blage-E75         PSPSPH-----PMASPA
Apido-E75         -----

Drome-E75          LSAAVHKVMLEA
Tal-REVERB        -----MET
Blage-E75         TTVTHKVVSLA
Apido-E75         -----

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**Figure S20. Putative *Talitrus saltator* REVERB protein**

Alignment of *Drosophila melanogaster* E75 (Drome-E75; Accession No. NP\_730321) with the *T. saltator* (Tal-REVERB) deduced from the Trinity *de novo* transcriptome assembly, together with the top two tblastn species homologue sequences *Blattella germanica* E75 (Blage-E75; Accession No. AM710419) and *Apis dorsata* E75 (Apido-E75; Accession No. XM\_006618394). '\*' indicates identical amino acid residues in the two proteins, '.' and ':' indicate similar amino acid residues between the two proteins. In this figure SMART identified domains consisting of one C4 zinc finger domain and one HOLI ligand binding domain are highlighted in yellow and green respectively.