
Drome-RORA MASLLGSAPPAQILANQPIIVKIEPTQSFHIVDEGDTRVLSLPLSDADKLGASWIDLKDI
Tal-RORA -------MDDSTLDLDTSGLLRVGGLLQSSLQDGSGSMGDSSSNRDEDMMGITHISPANS
Drogr-RORA ------MYTQRMFDMWSSVTSKLEA--------------------HANNLG---------
Droan-RORA ------MYTQRMFDMWSSVTSKLEA--------------------HANNLG---------
Drome-RORA AGLQAGGGATLLDVCFEQANEDGTIIATVQPDLENELEAELKAEGEPEDETEPEPPAPKR
Tal-RORA SQFKQQQESQLSTTTPNILGFPGGNPSSNSGSTLLNISSIPNLTSPPLSCASSNQNQSER
Drogr-RORA --
Droan-RORA --
Drome-RORA LATTRPAQSRPQQQQQQQQQQVKFLSDPPALARSSSFS--SLSSFSSISNISSVCKNMAS
Tal-RORA ----SPHLQQPHSSNNNRDCPAAFETNRSFLESCEDFTLDEISSDRSASTMSSLQNIPSI
Drogr-RORA ----QSNVQSPAAQNN--
Droan-RORA ----QSNVQSPAGQNN--
Drome-RORA NTSQEGSLKRTKERTPPPMPPLTTHKPAATTTATSATSAAAATSAATASATATSARENSR
Tal-RORA SGSKMGLLERKADRD-------LLNEILAGINEDRDRERDRDRDMADTTTPTSSTPTPTP
Drogr-RORA --
Droan-RORA --
Drome-RORA EHSSSSSGSNGAMTAQIEIIPCKVCGDKSSGVHYGVITCEGCKGFFRRSQSSVVNYQCPR
Tal-RORA RIQSVADKKCNSIKAQIEIIPCKVCGDKSSGVHYGVITCEGCKGFFRRSQSSVVNYQCPR
Drogr-RORA --------SSGSIKAQIEIIPCKVCGDKSSGVHYGVITCEGCKGFFRRSQSSVVNYQCPR
Droan-RORA --------SSGSIKAQIEIIPCKVCGDKSSGVHYGVITCEGCKGFFRRSQSSVVNYQCPR
Drome-RORA NKQCVVDRVNRNRCQYCRLQKCLKLGMSRDAVKFGRMSKKQREKVEDEVRFHRAQMRAQS
Tal-RORA QKNCVVDRVNRNRCQYCRLQKCLQLGMSRDAVKFGRMSKKQREKVEDEVRYHKSQMRAAS
Drogr-RORA NKQCVVDRVNRNRCQYCRLQKCLKLGMSRDAVKFGRMSKKQREKVEDEVRFHRAQMRAQS
Droan-RORA NKQCVVDRVNRNRCQYCRLQKCLKLGMSRDAVKFGRMSKKQREKVEDEVRFHRAQMRAQS
Drome-RORA --DAAPDSSVYDTQTPSSSDQLHHNNYN--SGGYSNNEVGYGSPYGYSASVTPQQTMQYD
Tal-RORA GPETSPDSSVYEPTSP--SQDMFSAQY-----GFGSNELNFNNHYSFSPRPGGASGSSLD
Drogr-RORA --DAAPDSSVYDTQTPSSSDQLQHTNYNSYSGGYSSNEVGYGSPYGYSASVTPQQTMQYD
Droan-RORA --DAAPDSSVYDTQTPSSSDQLHHNNYNSYSGGYSNNEVGYGSPYGYSASVTPQQTMQYD
Drome-RORA ISADYVDSTTYEPRSTIIDPEFISHADGDINDVLIKTLAEAHANTNTKLEAVHDMFRKQP
Tal-RORA ISS--ADSTTYDPQSR------------GCLDIQAQTSLDS-GDTDSHSSPLLSACRNER
Drogr-RORA ISADYVDSTTYEPRSTMIDPEFISHADGDINDVLIKTLAEAHANTNTKLESVNDMFRKPQ
Droan-RORA ISADYVDSTTYEPRSTIIDPEFISHADGDINDVLIKTLAEAHNNTNTKLEAVHDMFRKQP
Drome-RORA DVSRILYYKNLGQEELWLDCAEKLTQMIQNIIEFAKLIPGFMRLSQDDQILLLKTG--SF
Tal-RORA Q---------------W-----KNSEAVPASWDYRKSVQGFRNLPLD-----IRSGGCSS
Drogr-RORA DLSRILYYKNLGQEELWLDCAEKLTQMIQNIIEFAKLIPGFMRLSQDDQILLLKTG--SF
Droan-RORA DVSRILYYKNLGPEELWLDCAEKLTQMIQNIIEFAKLIPGFMRLSQDDQILLLKTG--SF
Drome-RORA ELAIVRMSRLLDLSQNAVLYG-DVMLPQEAFYTSDSEEMRLVSRIFQTAKSIAELKLTET
Tal-RORA NMQGAMKPDLMEGGGGSLSHDMDILIKQEV----DGLDMNNLQSSHISGDSVETDMASPD
Drogr-RORA ELAIVRMSRLLDLSQNAVLYG-DVMLPQEAFYTSDSDEMRLVSRIFQTAKSIAELKLTET
Droan-RORA ELAIVRMSRLLDLSQNAVLYG-DVMLPQEAFYTSDSEEMRLVSRIFQTAKSIAELKLTET
Drome-RORA ELALYQSLVLLWPERNGVRGNTEIQRLFNLSMNAIRQELETNHAPLKGDVTVLDTLLNNI
Tal-RORA HMTSVDSTTFLPCPSVSPQPNSSQA---GLHLHHDRPHMGPFGAADHGDFTDLHHHQQQQ
Drogr-RORA ELALYQSLVLLWPERNGVRGNTEIQRLFNLSMNAIRQELETNHAPLKGDVTVLDTLLNNI
Droan-RORA ELALYQSLVLLWPERNGVRGNTEIQRLFNLSMNAIRQELETNHAPLKGDVTVLDTLLNNI

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Drome-RORA      PNFRDISILHMESLSKFKLQHPNVVFPALYKELFSIDSQQDLT
Tal-RORA        QQQQ------------------------------EQQQQQQ
Drogr-RORA      PNFRDISILHMEALSKFKQQHPTVVFPALYKELFSIDSQQDLT
Droan-RORA      PNFR------------------------------------
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Additional file 24. Putative *Talitrus saltator* RORA protein

Alignment of *Drosophila melanogaster* RORA (Drome-RORA; Accession No. NP_788301) with the *T. saltator* RORA (Tal-RORA) deduced from the Trinity *de novo* transcriptome assembly, together with the top two tblastn species homologue sequences *Drosophila grimshawi* RORA (Drogr-RORA; Accession No. XM_001987136) and *Drosophila ananassae* RORA (Droan-RORA; Accession No. XM_001959222). '*' 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.