

Supplementary Figure 1

Amastigote life stage

A

Novel gene 1: Hypothetical

Leishmania donovani CL_SL Chromosome 04 (Negative strand)

Current Annotation

Gene: LdCL_040017800

Gene: LdCL_040017900

Leucine Rich repeat

Casein kinase I



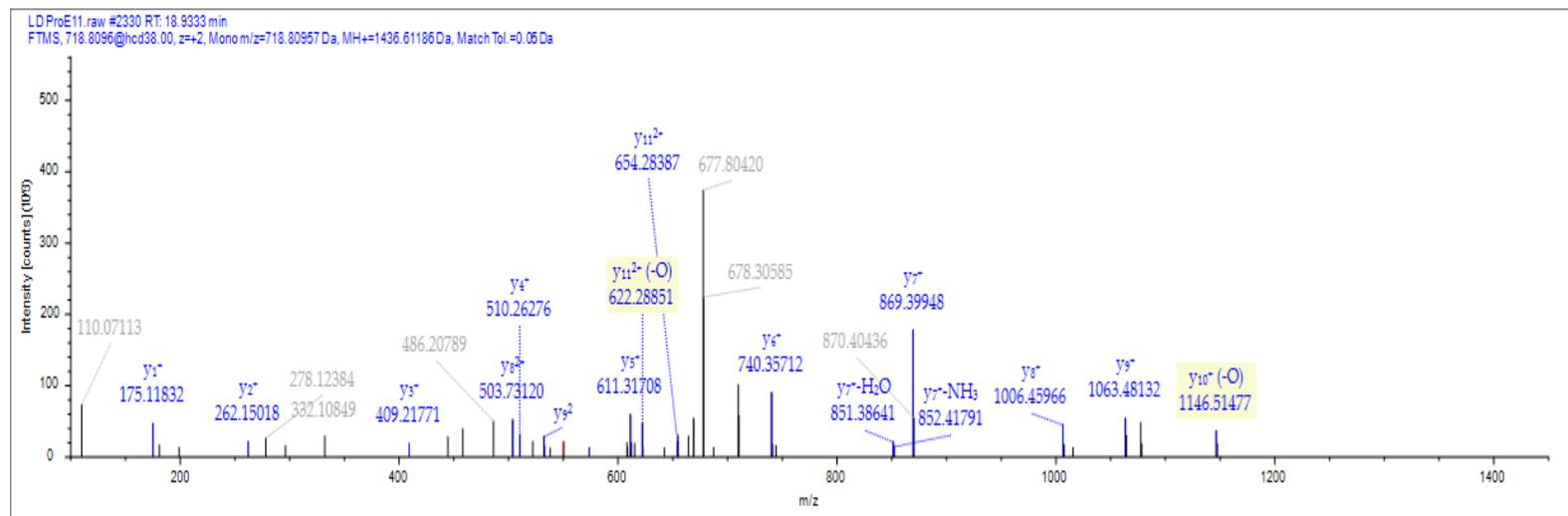
B

Novel_1 MFRRCARRLGHQLIK**EPMGHEETFSR**GDRTRNNALQHIYGLIGFCGVGCVLALFSFVSG 60
LTRL590_040017200 MFRRCARRLGHQLIKEPMGHEETFSRGDRTRNNALQHIYGLIGFCGVGCVLALFSFVSG 60

Novel_1 QRRVLTITADGTITKGTCPTKWWNF 86
LTRL590_040017200 QRRVQTTITADGTITKGTCPTKWWNF 86
**** *****

C

EPMGHEETFSR



Supplementary Figure 2 Amastigote life stage

A Novel gene 2: Hypothetical

Leishmania donovani CL_SL Chromosome 06 (Negative strand)

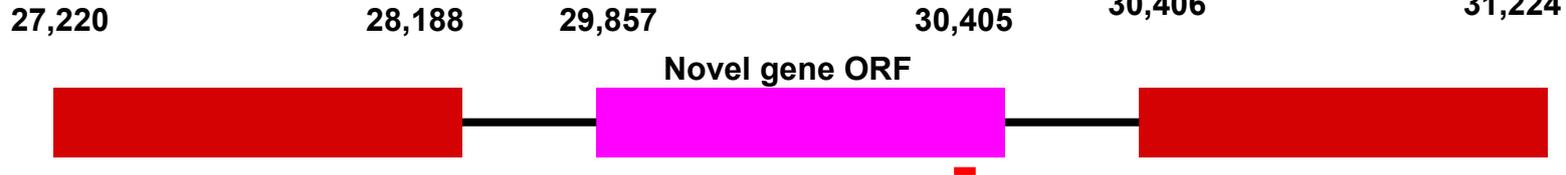
Current Annotation

Gene: LdCL_060005500

Gene: LdCL_060005600

Hypothetical

Hypothetical



B

Novel_2
LTULEM423_060005500
MTLMHDDVLVVAGVSVCHVLWFAVDTHSLLLASATADAVRISQKERWQQQSPHDGGTWE 60

Novel_2
LTULEM423_060005500
NEDVQLDFVLYDAKASAMNDTSEVVDYTFLLTAQPQPSRVPGEALVAYQARLKHWEACYA 120

Novel_2
LTULEM423_060005500
AHYAARFIDHLRSASPALSFEYDSVLKLISSADGQRTVRGLVAPTLDGSGHHLISFTVPL 180

Novel_2
LTULEM423_060005500
FVTGRAAKVFQSLNNVAVLYCKMSHVWKWPSYQLTSVEADVHTRFRTAORTGRITLIAES 240

Novel_2
LTULEM423_060005500
VVLCLRDAAAAGGAAGATTEGRAADSLISFLHSCVDLHGLPRLSMAQQGAGFLDHIPLRE 300
* :***** *****

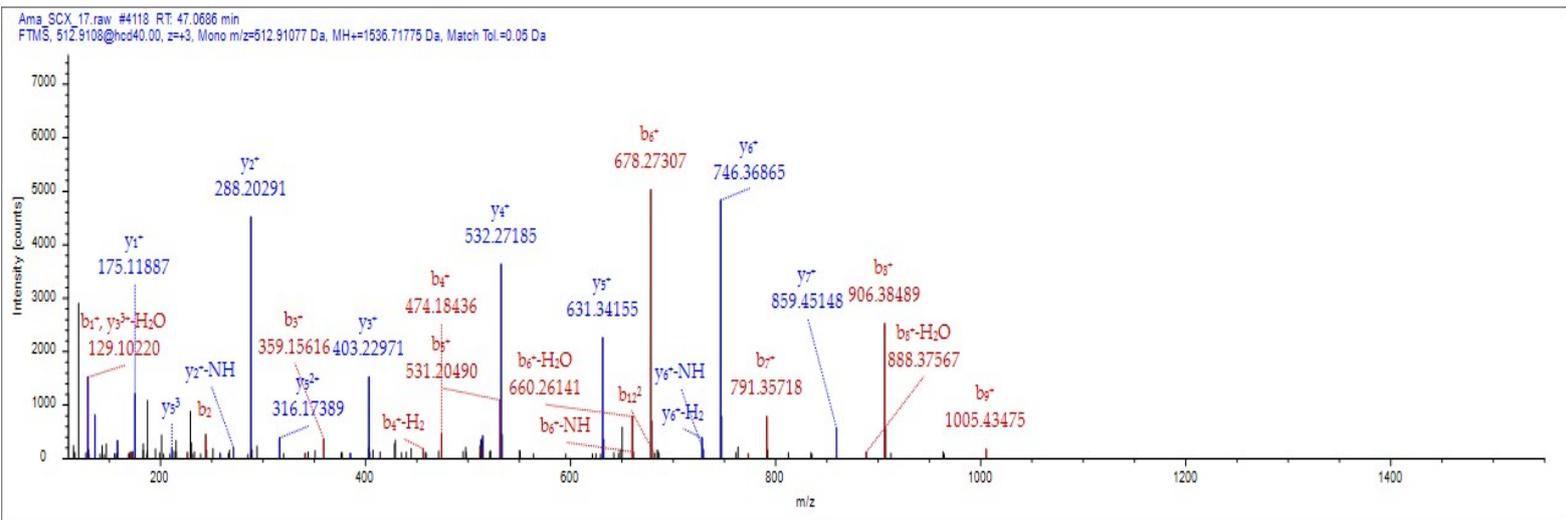
Novel_2
LTULEM423_060005500
HTLYRRIREPLHFMKLVGLMVDGSPIDVSASCALRALTATVDSTTPQLPLSWSPPPPQ--74
HTLYRRIREPLHFMKLVGLMADFGSPIDVSASCALRALTATVDSATPQLPLSWSPQQQQQQ 360
***** . ***** :***** *

Novel_2
LTULEM423_060005500
-HPPPMRKTATFCVVYRTTKMSFTIGLHDQSGDECLSVETTCNQYLDTRHGATVSRVKF 123
QHPPPMRRTATFCVVDRTTAMSFTIGLHYQSGDEFPSVETTCNQYLDQHGATVSRVKF 420
***** :***** ** ***** ***** ***** :*****

Novel_2
LTULEM423_060005500
SRSASSMRKDDDGFLDVEDLRVIVVRETLECMGSAQA 162
SRSASSMRKDDDGFLDVEDLRVIVVRETLECMGSAALA 459
***** ***** *

C

KDDDGFLDVEDLR



A Novel gene 4: Hypothetical

Leishmania donovani CL_SL Chromosome 27 (Positive strand)

Current Annotation

Gene: LdCL_270022000

Gene: LdCL_270022100

Hypothetical

Prolyl-tRNA synthetase

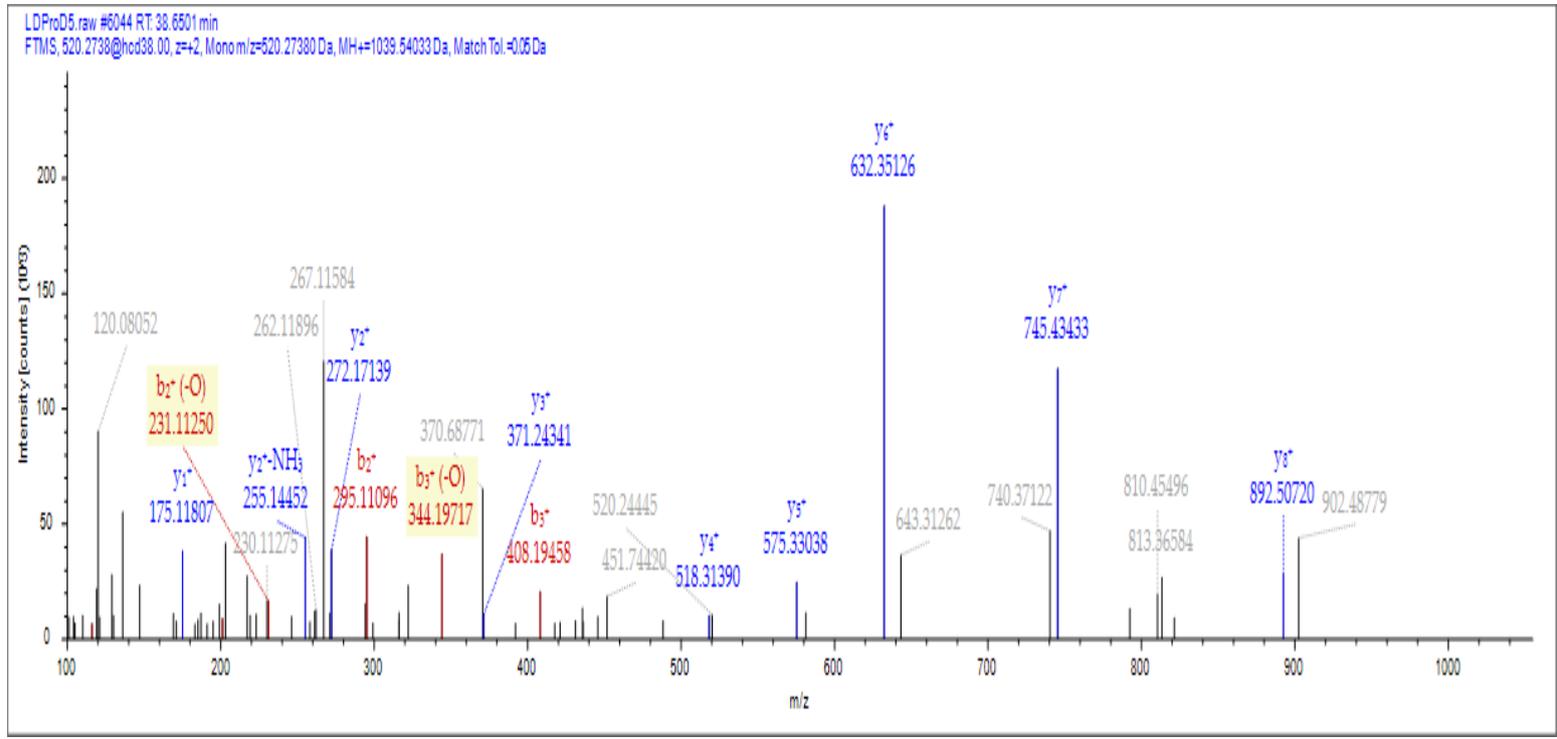


B

Novel_4 **MFLGGFVPRRFAQFNRPWWMFFIFAIGAWAGEYPAMQIKYNARDLVLDPHRYVWSHLDD**
 LGELEM452_270022800 MFLGGFVPRRFAQFNRPWWMFFIFAIGAWAGEYPAMQIKYNARDLVLDPHRYVWSHLDD

Novel_4 HH
 LGELEM452_270022800 HH
 **

C MFLGGFVPR

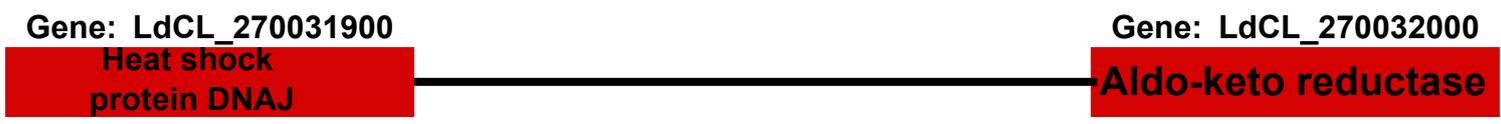


Supplementary Figure 5

Amastigote life stage

A Novel gene 5: Glyceraldehyde 3-phosphate dehydrogenase, glycosomal *Leishmania donovani* CL_SL Chromosome 27 (Positive strand)

Current Annotation



B

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Novel_5 -----
LtaPh_3029641  MLAANTTHGKLS EYQQRVLLSCMGIAPLHLGARSVLGGHVVAHQVHHAVRVGPLVVVPRHD 60

Novel_5 -----
LtaPh_3029641  LEEALLSRQVVLQGR LGVVDGAAVVVDKVGAD ELLIGEADALHVRLRRLLDGLVDLLDR 120

Novel_5 -----
LtaPh_3029641  RVARCAERQIHDGHV RRRRHAEGHASQLALGGRNHHAHGLRGAS RARDDVYGRRAATTPVL 180

Novel_5 -----
LtaPh_3029641  -----MHDGGQAVGRARRVRHHVRRRRV LVLV 28
ERHAVHRLRLRCRVGVNGGHQTGLDAEVLLRQH VHNNGGQAVGRARRIRHHVRRRRV LVLV 240
: * : ***** : *****

Novel_5 -----
LtaPh_3029641  HAHHDCLGAARRRSAD HDLLRATLDVALGLQLVREQASRLNHVVHAELAPRQIRGVALRL 88
HAHHNRLGAARRRGADH NLLRATLDVALS LQLVREQAGRLDHIVHTKLAPRQVRRVALRL 300
**** : ***** . *** : ***** . ***** . ** : * : * : ***** : * *****

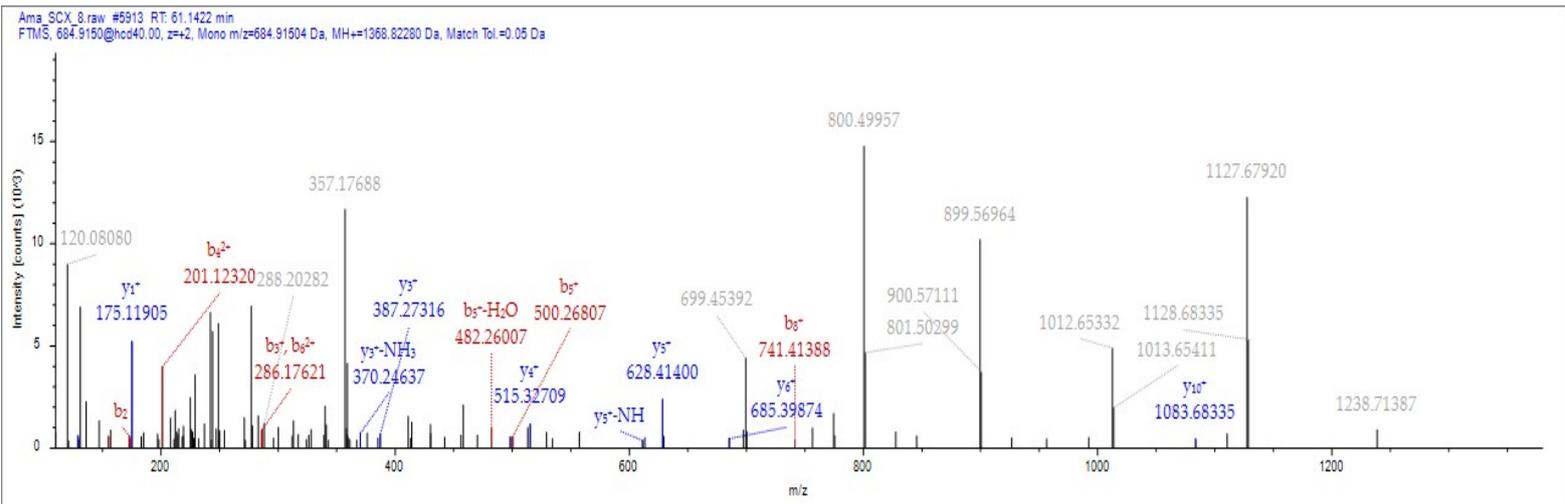
Novel_5 -----
LtaPh_3029641  HALDVVAVVHHKHIR RLHGRTALHSLHRVLR AAVHRVVLHLVREVF SIRAHVHHGDDVDLG 148
HALDTVAVVHHKHIR RLHGWAALHSLHCVFRA AVHRVVLHLVCKVFGIRAHVHHRDDVDLS 360
**** . ***** : ***** * : ***** : ** . ***** ***** .

Novel_5 -----
LtaPh_3029641  ADKALVTDGLEHHAANA EAVDADLDGSHFV VREGVRDVSSVLRERESLCAI AVRAA 207
ADKTLVTDGLE YHATDAAEAVDADLDGSHCKVVG VGVGGEGCWFCCVERENLRVMEVRAV 420
*** : ***** : ** : ***** * : . . . *** . * . : *** .

Novel_5 P 208
LtaPh_3029641 - 420
    
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C

ATLDVALGLQLVR



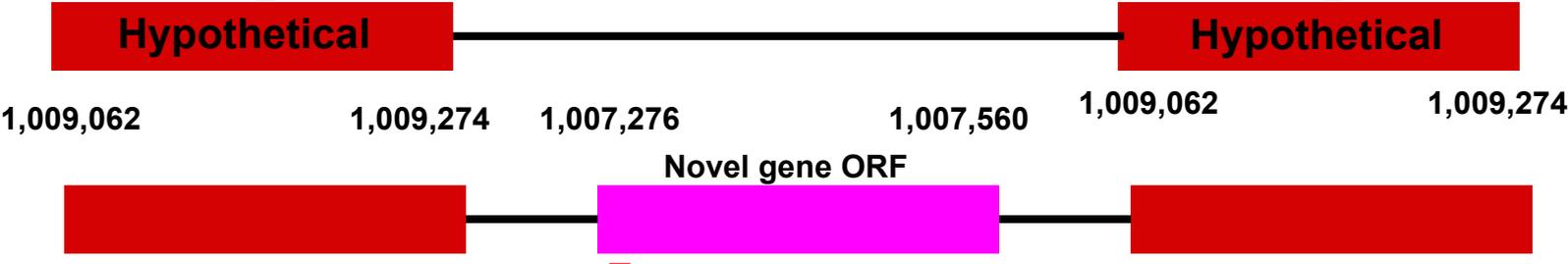
A Novel gene 6: Tryparedoxin 4

Leishmania donovani CL_SL Chromosome 31 (Negative strand)

Current Annotation

Gene: LdCL_310027900

Gene: LdCL_310028000



B

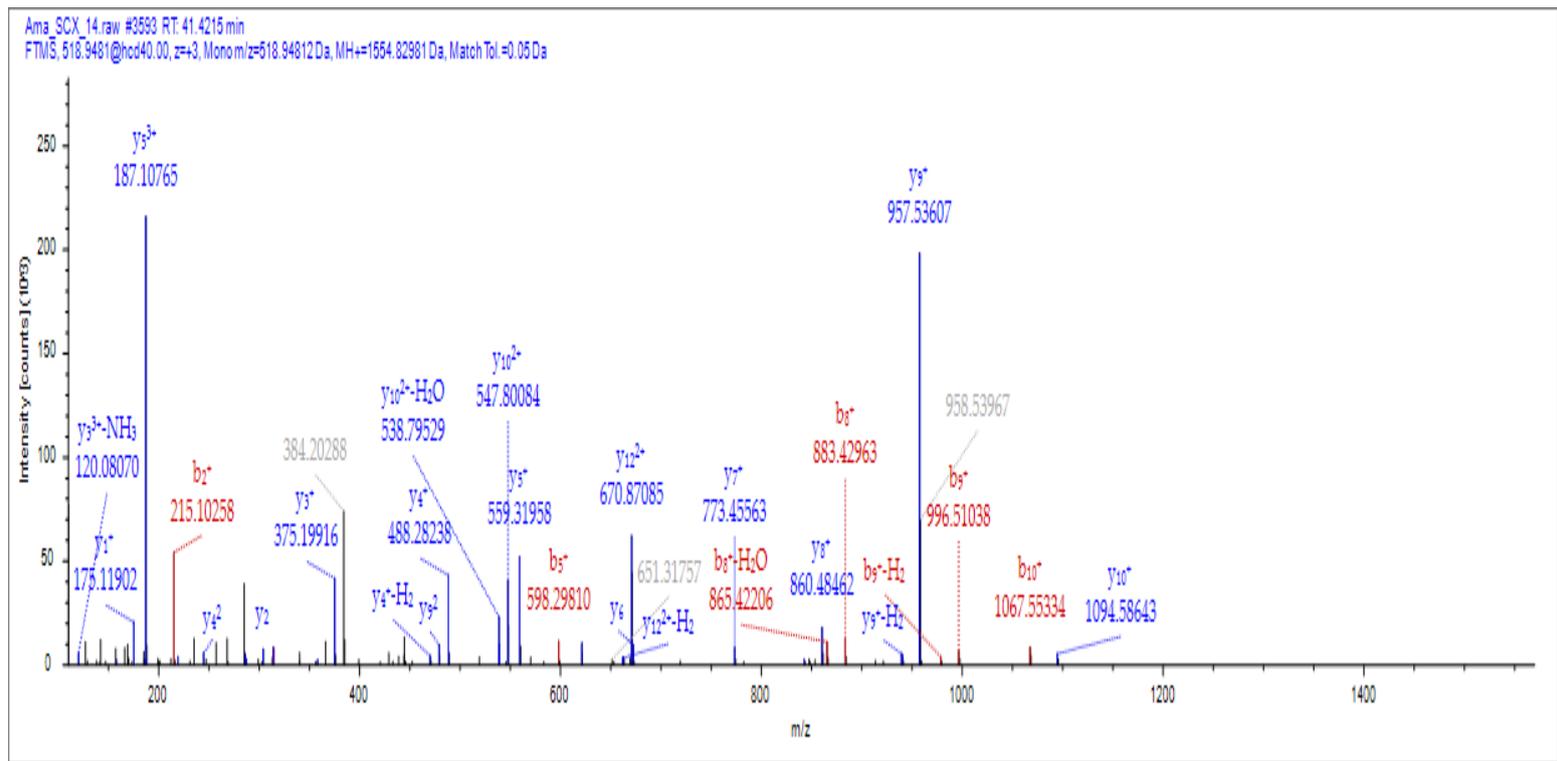
Novel_6 **MSHLFENAAI**ELLR****KQGTVAAAEVLGKKYVLICFSAHWCPPCRRF**TPKQK**GISREAS**R**- 59
 LMJLV39_310028100 MSHLFENAAV**ELLR**KQGTVAAAEALAGKKYVLIYFSAHWCPPCRS**F**TPKLKAFHEKHHVN 60
 *****:*****.***** ***** **** *.: .:

Novel_6 -----KAQLR**G**SLRL**Q**R**Q**F**T**R-- 75
 LMJLV39_310028100 HNF**E**VL**F**VSSDSS**P**DEM**R**TY**F**SEAHGD**W**L**L**LY**K**DA**Q**T**I**GR**D**LA**Q**QH**L**F**S**I**P**SL**L**V**L**EN 120
 ** :* : : :.

Novel_6 -----
 LMJLV39_310028100 NA**E**RR**V**V**T**S**Y**GR**D**M**V**LR**D**P**D**A**Q**S**F**P**W**H**N**A**A**I**I**NA**A**RR**S**FM**K**K**M**AV**I**V**V**LA**I**LL**L**L**L**I**Q** 180

C

MSHLFENAAIELLR****



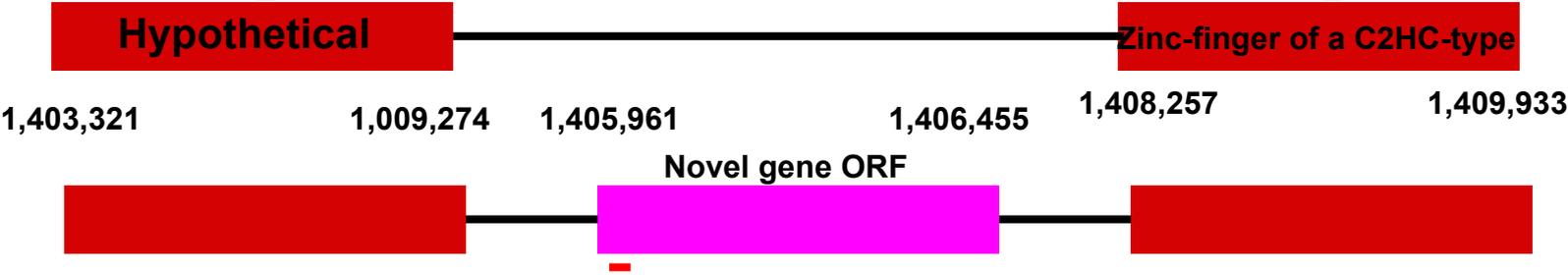
A Novel gene 7: Hypothetical

Leishmania donovani CL_SL Chromosome 32 (Positive strand)

Current Annotation

Gene: LdCL_320042300

Gene: LdCL_320042400



B

Novel_6	MYRASRRFLHTPSIR FTYALAK SCGSAGGAGATASPSAGKNAPRQTILESFDELPHKLRP 60
LMJSD75_320042700	MYRASRRFLHTPSIRFTYALAKSCGSTAGAGATATPSAAKSAPRQTILASFDELPHKLRP 60
	*****: .*****:***.*.***** *****
Novel_6	HVFEEIEIETIHMGAASYVPKHLQKKKK 89
LMJSD75_320042700	HVFEEIEIEMIHMGAASYVPKHLQKKKK 89
	***** *****

C

FTYALAK

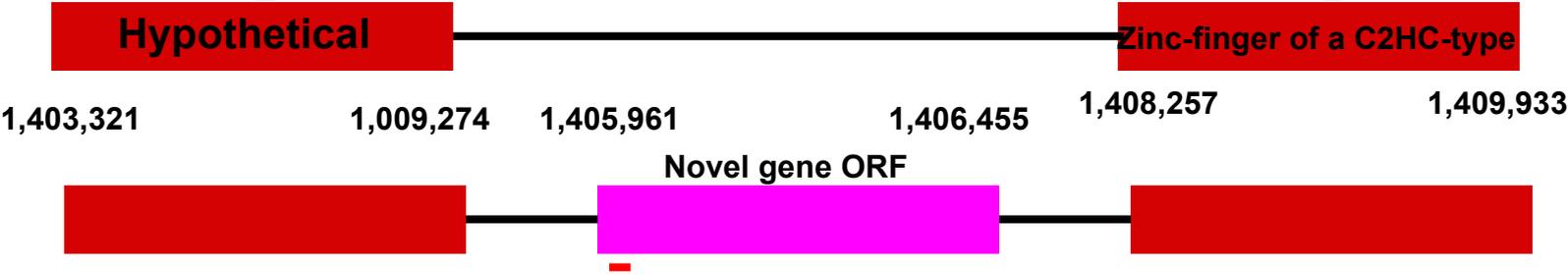
A Novel gene 8: Selenoprotein T

Leishmania donovani CL_SL Chromosome 32 (Positive strand)

Current Annotation

Gene: LdCL_320042300

Gene: LdCL_320042400



B

Novel_6
LdBPK_351130.1
MSASLFAKRRPRRATVLLVVASLALLEFVSAACCANSAREVQPTVEQNKDPYAYLDMLDEV 60

Novel_6
LdBPK_351130.1
DLQQMLYEKTHGQVPVSAFRDKKELVAAVRKLEEREDEEASFNARVMAAMQRKAALMQQN 120

Novel_6
LdBPK_351130.1
NGADAPSAKAGSRVSSPSPRHRSAAEENNNIKDSKEKKTRKVVQLMDEDEMKTQDGPSH 180

Novel_6
LdBPK_351130.1
SQEKARATDVSAAGGGAGYAGAKKASPTRQLSAMHELEVLYCTGUGYAKYFEDMKQQLQR 240

Novel_6
LdBPK_351130.1
TLPN AQEVR **IVGGTYPTPPAR** ALAAKACSTAFSLGVALAGQQLVFLPPTVLNFI AQQR 67
TLPN AQEVRIVGGTYPTPPARALAAKACSTAFSLGVALAGQQLVFLPPTVLNFI AQQR 300

Novel_6
LdBPK_351130.1
GMLIGAGFLLNMVGGALGQTGA FEVSLDGELIFSKL **QAGAVPTVAEIR** RIVLQKTLLDKY 127
GMLIGAGFLLNMVGGALGQTGA FEVSLDGELIFSKLQAGAVPTVAEIRRIVLQKTLLDKY 360

Novel_6
LdBPK_351130.1
GDSSAASS 135
GDSSAASS 368

C

IVGGTYPTPPAR

