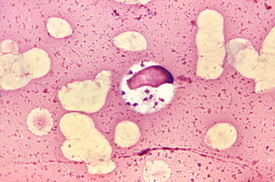
Отчет по индивидуальной части проекта по курсу Биоинформатика

Leishmania donovani



Вид жгутиконосных паразитических протистов рода Leishmania, является возбудителем кала-азара — антропонозного висцерального лейшманиоза. Единственным доказанным естественным резервуаром является человек. Переносчиком служат несколько видов москитов рода Phlebotomus.

Упоминается в 13 публикациях на PubMed. Размер генома 32.4 Мб, N50 равен 1 Мб. Включает 8123 гена, из них 7953 кодируют белки.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Название генома | Идентификатор | Длина | Число генов | Число найденных квадруплексов | Число ZDNA  ZDNABERT |
| Leishmania donovani | [ASM22713v2](https://www.ncbi.nlm.nih.gov/datasets/genome/GCF_000227135.1/) | 996 Kb | 406 | 440 | 3893 |
| Число ZDNA  Zhunt |
| 5070 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Участок | Число квадруплексов | Доля квадруплексов | Число предсказаний Zhunt | Доля предсказантй Zhunt | Число предсказаний ZDNABERT | Доля предсказаний ZDNABERT |
| Exons | 20 | 4,54% | 2094 | 41,3% | 1561 | 40,1% |
| Promoters | 236 | 53,63% | 3656 | 72,11% | 2801 | 71,95% |
| Downstream | 76 | 17,27% | 2417 | 47,67% | 1840 | 47,26% |
| Introns | 422 | 95,9% | 4919 | 97,02% | 3780 | 97,1% |
| Intergenic | 422 | 95,9% | 4919 | 97,02% | 3780 | 97,1% |

|  |  |  |
| --- | --- | --- |
| family | gene | coordinates |
| 2-Hacid\_dh | LDBPK\_030030 | 7058-8282 |
| 2-Hacid\_dh\_C | LDBPK\_030030 | 7058-8282 |
| AAA | LDBPK\_030520 | 202188-203379 |
| AAA | LDBPK\_020670 | 312644-315458 |
| AAA | LDBPK\_030140 | 36918-37851 |
| AAA | LDBPK\_010480 | 119407-123727 |
| AAA\_22 | LDBPK\_020670 | 312644-315458 |
| AAA\_22 | LDBPK\_030520 | 202188-203379 |
| AAA\_22 | LDBPK\_030140 | 36918-37851 |
| AAA\_22 | LDBPK\_030590 | 226908-227958 |
| AAA\_22 | LDBPK\_010790 | 244213-245425 |
| AAA\_22 | LDBPK\_020260 | 124556-126149 |
| Acetyltransf\_1 | LDBPK\_030120 | 33840-34389 |
| Acetyltransf\_7 | LDBPK\_030120 | 33840-34389 |
| Ank | LDBPK\_030460 | 167698-170728 |
| Ank | LDBPK\_030790 | 309331-316513 |
| Ank\_2 | LDBPK\_030460 | 167698-170728 |
| Ank\_2 | LDBPK\_030790 | 309331-316513 |
| Ank\_4 | LDBPK\_030460 | 167698-170728 |
| Ank\_4 | LDBPK\_030790 | 309331-316513 |
| C2 | LDBPK\_010740 | 220436-224348 |
| CBS | LDBPK\_010170 | 42057-43431 |
| DEAD | LDBPK\_010790 | 244213-245425 |
| DEAD | LDBPK\_030670 | 261977-268607 |
| DEAD | LDBPK\_010230 | 62746-63490 |
| DNA\_methylase | LDBPK\_030050 | 13344-14517 |
| DUF913 | LDBPK\_020230 | 118544-119369 |
| EXOSC1 | LDBPK\_030960 | 387107-388349 |
| Exo\_endo\_phos | LDBPK\_010020 | 5749-7411 |
| FATC | LDBPK\_020100 | 32100-46818 |
| Haspin\_kinase | LDBPK\_030190 | 48025-49708 |
| Helicase\_C | LDBPK\_010790 | 244213-245425 |
| Helicase\_C | LDBPK\_010230 | 62746-63490 |
| Helicase\_C | LDBPK\_030670 | 261977-268607 |
| HR1 | LDBPK\_020660 | 310492-311857 |
| HSP70 | LDBPK\_010660 | 188302-191632 |
| LRR\_1 | LDBPK\_030740 | 291528-292482 |
| LRR\_1 | LDBPK\_030840 | 349640-354269 |
| LRR\_1 | LDBPK\_030010 | 1211-4241 |
| LRR\_1 | LDBPK\_030100 | 26694-29370 |
| LRR\_1 | LDBPK\_020610 | 295181-299426 |
| LRR\_4 | LDBPK\_030010 | 1211-4241 |
| LRR\_4 | LDBPK\_020610 | 295181-299426 |
| LRR\_4 | LDBPK\_030740 | 291528-292482 |
| LRR\_4 | LDBPK\_030100 | 26694-29370 |
| LRR\_4 | LDBPK\_030840 | 349640-354269 |
| LRR\_6 | LDBPK\_030740 | 291528-292482 |
| LRR\_6 | LDBPK\_030100 | 26694-29370 |
| LRR\_6 | LDBPK\_030840 | 349640-354269 |
| LRR\_8 | LDBPK\_030100 | 26694-29370 |
| LRR\_8 | LDBPK\_030010 | 1211-4241 |
| LRR\_8 | LDBPK\_030840 | 349640-354269 |
| LRR\_8 | LDBPK\_030740 | 291528-292482 |
| LRR\_9 | LDBPK\_030740 | 291528-292482 |
| LRR\_9 | LDBPK\_030100 | 26694-29370 |
| Methyltransf\_11 | LDBPK\_030580 | 223906-225124 |
| Methyltransf\_31 | LDBPK\_030580 | 223906-225124 |
| Methyltransf\_31 | LDBPK\_030050 | 13344-14517 |
| MORN | LDBPK\_030950 | 385388-386366 |
| NAD\_binding\_2 | LDBPK\_030030 | 7058-8282 |
| PI3\_PI4\_kinase | LDBPK\_020100 | 32100-46818 |
| Pkinase | LDBPK\_030190 | 48025-49708 |
| Pkinase | LDBPK\_020530 | 246370-248914 |
| Pkinase | LDBPK\_020330 | 162458-163604 |
| Pkinase | LDBPK\_030750 | 293723-295370 |
| Pkinase | LDBPK\_030750 | 293723-295370 |
| Pkinase | LDBPK\_020260 | 124556-126149 |
| Pkinase | LDBPK\_030330 | 99016-103381 |
| Pkinase | LDBPK\_010770 | 237050-241286 |
| PK\_Tyr\_Ser-Thr | LDBPK\_020530 | 246370-248914 |
| PK\_Tyr\_Ser-Thr | LDBPK\_020260 | 124556-126149 |
| PK\_Tyr\_Ser-Thr | LDBPK\_030190 | 48025-49708 |
| PK\_Tyr\_Ser-Thr | LDBPK\_030750 | 293723-295370 |
| PK\_Tyr\_Ser-Thr | LDBPK\_030750 | 293723-295370 |
| PK\_Tyr\_Ser-Thr | LDBPK\_020330 | 162458-163604 |
| PK\_Tyr\_Ser-Thr | LDBPK\_030330 | 99016-103381 |
| PK\_Tyr\_Ser-Thr | LDBPK\_010770 | 237050-241286 |
| PrmA | LDBPK\_030580 | 223906-225124 |
| PseudoU\_synth\_2 | LDBPK\_010270 | 73640-73964 |
| RNase\_PH | LDBPK\_020280 | 142769-144842 |
| RRM\_1 | LDBPK\_030490 | 181350-189243 |
| RRM\_1 | LDBPK\_030180 | 45833-46466 |
| S1 | LDBPK\_030960 | 387107-388349 |
| SAM\_1 | LDBPK\_010030 | 9002-11024 |
| SNF2-rel\_dom | LDBPK\_010230 | 62746-63490 |
| TIP49 | LDBPK\_030520 | 202188-203379 |
| TIP49 | LDBPK\_020670 | 312644-315458 |
| TPR\_1 | LDBPK\_020550 | 269830-281197 |
| TPR\_11 | LDBPK\_020550 | 269830-281197 |
| TPR\_2 | LDBPK\_020550 | 269830-281197 |
| TPR\_8 | LDBPK\_020550 | 269830-281197 |
| UBA | LDBPK\_010210 | 51728-54425 |
| ubiquitin | LDBPK\_030740 | 291528-292482 |
| UBN\_AB | LDBPK\_030700 | 280242-283563 |
| UQ\_con | LDBPK\_020350 | 167839-169213 |
| WD40 | LDBPK\_010320 | 81600-82032 |
| WD40 | LDBPK\_020590 | 288973-290677 |
| zf-B\_box | LDBPK\_030250 | 63532-64441 |
| zf-C2H2\_4 | LDBPK\_010820 | 255492-256965 |
| zf-C2H2\_6 | LDBPK\_010820 | 255492-256965 |
| zf-C2H2\_jaz | LDBPK\_020110 | 48376-49096 |
| zf-C3HC4 | LDBPK\_010450 | 107950-110194 |
| zf-C3HC4\_2 | LDBPK\_010450 | 107950-110194 |
| zf-C4 | LDBPK\_010410 | 98444-100907 |
| zf-CCCH | LDBPK\_030180 | 45833-46466 |
| zf-CCCH | LDBPK\_020080 | 21787-24541 |
| zf-met | LDBPK\_020110 | 48376-49096 |
| zf-MYND | LDBPK\_013360 | 337891-340801 |
| zf-rbx1 | LDBPK\_010450 | 107950-110194 |
| zf-RING\_2 | LDBPK\_010450 | 107950-110194 |
| zf-RING\_2 | LDBPK\_020120 | 50003-51839 |
| zf-RING\_2 | LDBPK\_030010 | 1211-4241 |
| zf-RING\_5 | LDBPK\_010450 | 107950-110194 |
| zf-UBP | LDBPK\_010450 | 107950-110194 |