Table S4. The list and the nucleotide sequences of 32 GRs of *P. akamusi* identified in present study.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Unigene | Gene name | Accession number | ORF(bp) | Complete ORF | Blastx annotation | Score | e\_value | Identity (%) |
| CL907.Contig2\_All | PaGR1 | MN132938 | 1839 | Yes | gi|969474873|ref|XP\_015038251.1|/1.47932e-140/uncharacterized protein Dpse\_GA16009, isoform B [Drosophila pseudoobscura pseudoobscura]  | 362.84 | 1.48e-140 | 54.14 |
| Unigene4874\_All | PaGR2 | MN132939 | 432 | Yes | gi|906458862|gb|KNC22003.1|/2.57152e-20/putative gustatory receptor 59f [Lucilia cuprina] | 103.99 | 2.57e-20 | 37.72 |
| Unigene4494\_All | PaGR3 | MN132940 | 597 | No | gi|195481628|ref|XP\_002101716.1|/3.4589e-11/uncharacterized protein Dyak\_GE17782 [Drosophila yakuba]  | 73.94 | 3.46e-11 | 24.55 |
| Unigene13846\_All | PaGR4 | MN132941 | 294 | Yes | gi|568252095|gb|ETN61475.1|/7.07845e-21/allatostatin 2 [Anopheles darlingi] | 107.07 | 7.08e-21 | 48.36 |
| Unigene7969\_All | PaGR5 | MN132942 | 333 | No | gi|568249794|gb|ETN59575.1|/1.0241e-10/gustatory receptor [Anopheles darlingi] | 70.48 | 1.02e-10 | 30.97 |
| Unigene7981\_All | PaGR6 | MN132943 | 258 | No | gi|170062194|ref|XP\_001866562.1|/2.0997e-08/conserved hypothetical protein [Culex quinquefasciatus]  | 62.77 | 2.10e-08 | 27.97 |
| Unigene14322\_All | PaGR7 | MN132944 | 474 | No | gi|906469696|gb|KNC30394.1|/1.59922e-43/putative gustatory receptor 64f [Lucilia cuprina] | 180.64 | 1.60e-43 | 41.41 |
| Unigene11996\_All | PaGR8 | MN132945 | 1575 | Yes | gi|568255233|gb|ETN64058.1|/9.34363e-33/gustatory receptor [Anopheles darlingi] | 143.67 | 9.34e-33 | 63.96 |
| Unigene15118\_All | PaGR9 | MN132946 | 390 | No | gi|194748643|ref|XP\_001956754.1|/1.51601e-41/uncharacterized protein Dana\_GF10085 [Drosophila ananassae]  | 174.10 | 1.52e-41 | 46.41 |
| Unigene15291\_All | PaGR10 | MN132947 | 219 | No | gi|951550797|ref|XP\_014475219.1|/8.85749e-07/PREDICTED: gustatory receptor for sugar taste 64f-like isoform X7 [Dinoponera quadriceps] | 57.38 | 8.86e-07 | 35.29 |
| Unigene19587\_All | PaGR11 | MN132948 | 1209 | Yes | gi|194759770|ref|XP\_001962120.1|/5.07234e-10/uncharacterized protein Dana\_GF14599 [Drosophila ananassae]  | 68.17 | 5.07e-10 | 37.89 |
| Unigene2820\_All | PaGR12 | MN132949 | 1293 | Yes | gi|929365084|ref|XP\_014092168.1|/2.76667e-53/PREDICTED: LOW QUALITY PROTEIN: gustatory receptor for sugar taste 64b-like [Bactrocera oleae] | 214.54 | 2.77e-53 | 38.1 |
| Unigene4002\_All | PaGR13 | MN132950 | 558 | No | gi|170062427|ref|XP\_001866663.1|/1.13703e-69/gustatory receptor for trehalose [Culex quinquefasciatus]  | 269.24 | 1.14e-69 | 54.62 |
| CL1143.Contig1\_All | PaGR14 | MN132951 | 1365 | Yes | gi|347969553|ref|XP\_307764.3|/7.82426e-63/AGAP003256-PA [Anopheles gambiae str. PEST]  | 247.28 | 7.82e-63 | 33.25 |
| Unigene2676\_All | PaGR15 | MN132952 | 792 | No | gi|765332942|ref|XP\_001647880.2|/3.85121e-47/AAEL000060-PA, partial [Aedes aegypti]  | 193.36 | 3.85e-47 | 36.63 |
| Unigene8790\_All | PaGR16 | MN132953 | 177 | No | gi|985403218|ref|XP\_015369415.1|/6.9512e-12/PREDICTED: gustatory receptor for sugar taste 64f-like isoform X2 [Diuraphis noxia] | 74.33 | 6.95e-12 | 35.58 |
| Unigene10519\_All | PaGR17 | MN132954 | 414 | No | gi|1000205604|gb|KXJ76746.1|/7.14688e-16/hypothetical protein RP20\_CCG009050 [Aedes albopictus] | 87.81 | 7.15e-16 | 31.18 |
| Unigene12040\_All | PaGR18 | MN132955 | 1656 | Yes | gi|668455345|gb|KFB43629.1|/1.0269e-07/AGAP001117-PD-like protein [Anopheles sinensis] | 60.46 | 1.03e-07 | 29.93 |
| Unigene13289\_All | PaGR19 | MN132956 | 342 | Yes | gi|668455345|gb|KFB43629.1|/2.57671e-26/AGAP001117-PD-like protein [Anopheles sinensis] | 125.95 | 2.58e-26 | 26.34 |
| Unigene14624\_All | PaGR20 | MN132957 | 3798 | Yes | gi|906469696|gb|KNC30394.1|/1.01314e-18/putative gustatory receptor 64f [Lucilia cuprina] | 97.06 | 1.01e-18 | 53.66 |
| Unigene15474\_All | PaGR21 | MN132958 | 93 | No | gi|1000206675|gb|KXJ77535.1|/7.59654e-06/hypothetical protein RP20\_CCG007326 [Aedes albopictus] | 54.30 | 7.60e-06 | 33.33 |
| Unigene15779\_All | PaGR22 | MN132959 | 210 | No | gi|158284679|ref|XP\_307760.4|/1.31386e-18/AGAP003253-PA [Anopheles gambiae str. PEST]  | 96.67 | 1.31e-18 | 41.75 |
| Unigene15784\_All | PaGR23 | MN132960 | 1191 | Yes | gi|170062427|ref|XP\_001866663.1|/4.27929e-38/gustatory receptor for trehalose [Culex quinquefasciatus]  | 161.38 | 4.28e-38 | 62.16 |
| Unigene17441\_All | PaGR24 | MN132961 | 1404 | Yes | gi|170041909|ref|XP\_001848689.1|/2.42193e-20/gustatory receptor 24 [Culex quinquefasciatus]  | 102.45 | 2.42e-20 | 60.49 |
| Unigene00008\_All | PaGR25 | MN132962 | 1527 | Yes | gi|158284679|ref|XP\_307760.4|AGAP003253-PA *[Anopheles gambiae str. PEST]* | 112 | 2.44e-30 | 55.88 |
| Unigene00539\_All | PaGR26 | MN132963 | 1044 | Yes | gi|642929128|ref|XP\_008195702.1|PREDICTED: putative gustatory receptor 28b *[Tribolium castaneum]* | 203 | 9.37e-57 | 39.60 |
| Unigene01689\_All | PaGR27 | MN132964 | 1236 | Yes | gi|557783627|ref|XP\_005191421.1|PREDICTED: putative gustatory receptor 2a *[Musca domestica]* | 68 | 1.04e-10 | 33.07 |
| Unigene02453\_All | PaGR28 | MN132965 | 2079 | Yes | gi|642936692|ref|XP\_008198539.1|PREDICTED: glutamate receptor ionotropic, delta-2 *[Tribolium castaneum]* | 100 | 2.30e-21 | 25.78 |
| Unigene04269\_All | PaGR29 | MN132966 | 2877 | Yes | gi|568252261|gb|ETN61614.1|Ionotropic receptor 21a *[Anopheles darlingi]* | 538 | 2.63e-180 | 44.81 |
| Unigene04990\_All | PaGR30 | MN132967 | 1893 | Yes | gi|499009072|ref|XP\_004536475.1|PREDICTED: putative gustatory receptor 2a-like *[Ceratitis capitata]* | 862 | 0 | 53.27 |
| Unigene10785\_All | PaGR31 | MN132968 | 258 | Yes | gi|498982126|ref|XP\_004529782.1|PREDICTED: putative gustatory receptor 66a-like *[Ceratitis capitata]* | 133 | 1.90e-31 | 29.36 |
| Unigene11260\_All | PaGR32 | MN132969 | 1395 | Yes | gi|157128603|ref|XP\_001655150.1|Gustatory receptor 21a, putative *[Aedes aegypti]* | 48 | 8.19e-06 | 42.37 |