***Supplementary Material***

**Cloning and Functional Characterization of Octβ2-Receptor and Tyr1-Receptor in the Chagas Disease Vector, *Rhodnius prolixus*.**

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**Supplementary Tables**

**Table S1.** Primers for the amplification of the receptor fragments

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| --- | --- |
| **Primer** | **Sequence (5'- 3')** |
| **RhoprOctβ2-R** |  |
| Octβ2-R Forward | GTACGACAGTGTTGCCAAGTTTG |
| Octβ2-R Reverse | ACTGCTGCCCACTTCGC |
| **RhoprTyr1-R** |  |
| Tyr1-R Forward | CTAATGAAAATGACTGACTGGGAC |
| Tyr1-R Reverse | GTATAAATAATTGGATTTAACGCCG |

**Table S2.** Primers for the amplification of 3’ region of the receptors

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| --- | --- |
| **Primer** | **Sequence (5'- 3')** |
| **Plasmid-Specific Primers** |  |
| pDNR-LIB -25 REV | GTGGATAACCGTATTACCGCC |
| **RhoprOctβ2-R** |  |
| Octβ2-R 3'RACE For2 | TTCAAGAATACCATCCAGTGTGC |
| Octβ2-R 3'RACE For1 | ACCCGCAGCATATATTCAGAAAC |
| **RhoprTyr1-R** |  |
| Tyr1-R 3'RACE For4 | GATGTACATGTTCCTGTGATGGC |
| Tyr1-R 3'RACE For3 | GGTCCAAGTAAACCAGTTTATCGAAG |
| Tyr1-R 3'RACE For2 | GGAGAGACGAGCCGCAC |
| Tyr1-R 3'RACE For1 | CATGTACGTCATCTTACCCTTC |

**Table S3.** Primers for the amplification of 5’ region of the receptors

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| --- | --- |
| **Primer** | **Sequence (5'- 3')** |
| **Plasmid-Specific Primers** |  |
| pDNR-LIB FOR1 | GTGGATAACCGTATTACCGCC |
| pDNR-LIB FOR2 | ACGGTACCGGACATATGCC |
| **RhoprOctβ2-R** |  |
| Octβ2-R 5'RACE Rev7 | CTAATGAAAATGACTGACTGGGAC |
| Octβ2-R 5'RACE Rev6 | TCTACATCTTCAAAATCTTGCATCG |
| Octβ2-R 5'RACE Rev5 | GGCAATAATGATCGCTCC |
| Octβ2-R 5'RACE Rev4 | CACGATCACCAACAGATTGC |
| Octβ2-R 5'RACE Rev3 | GATTATCCTCAACTTCCTGTGCC |
| Octβ2-R 5'RACE Rev2 | GAGCGATACGACGAAATAATTAGTG |
| Octβ2-R 5'RACE Rev1 | GAACGTCATCACAGCCAGC |
| **RhoprTyr1-R** |  |
| Tyr1-R 5'RACE Rev5 | GTCCCAGTCAGTCATTTTCATTAG |
| Tyr1-R 5'RACE Rev4 | GTTCGCCAGTTATGTTGCTTG |
| Tyr1-R 5'RACE Rev3 | CCATACTGGCACAGCGAATG |
| Tyr1-R 5'RACE Rev2 | GCTACAGTTAAATCAGCTACAGCTAACG |
| Tyr1-R 5'RACE Rev1 | CACACATGTATCCCAAATTCCCATC |

**Table S4.** Primers used for the mammalian expression vector preparation

|  |  |
| --- | --- |
| **Primer** | **Sequence (5'- 3')** |
| **Translation Initiation** |  |
| **RhoprOctβ2-R** |  |
| Octβ2-R (Kozak) For | **GCCACC**ATGGAAAGCATGGAGGCAG |
| Octβ2-R (Stop) Rev | CAGATCAAAGACTGCTGCCC |
| **RhoprTyr1-R** |  |
| Tyr1-R (Kozak) For | **GCCACC**ATGAAAATGACTGACTGGG |
| Tyr1-R (Stop) Rev | GGTCCAAGTAAACCAGTTTATCGAAG |
| **Insertion of Restriction Sites** |  |
| **RhoprOctβ2-R** |  |
| Octβ2-R (Bgl II) For | GATCTAGATCTGCCACCATGGAAAGCAT |
| Octβ2-R (Bam II) Rev | ATCATGGATCCTATATCAAAGACTGCTGCCCAC |
| **RhoprTyr1-R** |  |
| Tyr1-R (Bgl II) For | GATCTAGATCTGCCACCATGAAAATGACTG |
| Tyr1-R (Bam II) Rev | ATCATGGATCCCTTAAACATCACGTATTAGA  CTTAATATG |

**Table S5**. Primers used for RT-qPCR analysis of receptor transcripts.

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| --- | --- |
| **Primer** | **Sequence (5'- 3')** |
| **RhoprOctβ2-R** |  |
| Octβ2-R qPCR Forward | GTACGACAGTGTTGCCAAGTTTG |
| Octβ2-R qPCR Reverse | CACGATCACCAACAGATTGC |
| **RhoprTyr1-R** |  |
| Tyr1-R qPCR Forward | GGAGAGACGAGCCGCAC |
| Tyr1-R qPCR Reverse | CTGATGGACAGCAAACCGAAC |
| **Rhopr-α-tubulin** |  |
| α-TUB Forward | GTGTTTGTTGATTTGGAACCTACAG |
| α-TUB Reverse | CCGTAATCAACAGACAATCTTTCC |
| **Rhopr-β-actin** |  |
| β-ACT Forward | AGAGAAAAGATGACGCAGATAATGT |
| β-ACT Reverse | ATATCCCTAACAATTTCACGTTCG |
| **Rhopr-ribosomal protein 49** |  |
| Rp49 Forward | GTGAAACTCAGGAGAAATTGGC |
| Rp49 Reverse | AGGACACACCATGCGCTATC |