

Figure S5. Alignment of the primary sequences of animals. Identical sequences are indicated by (*).

(A) Alignment of the primary sequences of four different species from the genus *Heterodera* of Heteroderidae.

AF239234	ATAAAAGGCACTGCTGTGCCTGTTATGTTGGTGAGATCATGTCGGCATGACGTGTTCTTG	60
EU616684	ATAAAAGGCACTGCTGTGCCTGTTATGTTGGTGAGATCATGTCGGCTTGACGTGTTCTTG	
AF239235	ATAAAAGGCACTGCTTTGCCTGTTATGTTGGTGGGATCATGCTTCTTGACGTGTTCTTG	
DQ846902	ATAAAATGCACAGCTGTGCGTGTTGATCTCGTGGGATCATGCTGTTTGACGTGTTCTTG	
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AF239234	CGCTATTCTTGAAAATGCTCGGCCGTGGAGTGTGGTTGTGTTGGCGGAAACTGTCAGGT	120
EU616684	CGCTATTCTTGAAAATGCTCGGCCGTGGAGTGTGGTTGTGTTGGCGGATACTGTCAGGT	
AF239235	CGCTGTTTGTTCAA-TGCCCGGCTGTGGGATGTGGTTGTGTTGGCGGAAACTGTCAGGT	
DQ846902	CGTTATGTTG----TGCCCGGCTATGGGATTGTTATGCTAGCGGAAACTGTCAGTT	
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AF239234	T-CTTTCGCGTTTTACGGTCCGTAAGTACGCAACTGCTCGCCATGTGTGCTG-GGTG	180
EU616684	T-CTTTCGCGTTTTACGGTCCGTAAGTACGCAACTGCTCGCCTTGTGTGCTG-GGTG	
AF239235	TATTTTCGCGTTTTACGGTCCGTAAGTACGCAACTGCGTTCCATGTATGCTG-GGCG	
DQ846902	T-ATTTTCGCGTTTTACACACCGTAAGTACGCGCGTGGCCATTTCTCATGAATGCTGTGGTG	
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AF239234	GAAT—GCTTCGCTGGTAGGCATTCCGTGTT	211
EU616684	GAAT—GCTTCGCTGGTAGGCATTCCGTGTT	
AF239235	GAGT—GCTTCGCTGGTAGGCATTCCATGTT	
DQ846902	GAATATGCCTAGCATGT-GGCGTTCCGTGTT	
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(B) Alignment of the primary sequences of four species from different genera of Heteroderidae.

EF153835	---CAAAAAATGCACTGCATGTGCGTGTGTTTATTTGCTAA-GATCACGC---TTCGGCGT	60
AY090885	ACCAAAAAAATGCACTGCATGTGCGTGTGTTTGTGCTAGTAATCACGC---TCCGGCGT	
AF161007	--CCAAATAATGCACTGCATGTGCGTGTGTTTGACTGCTAA-GATCACGC---CTGGTCGT	
DQ846902	----ATAAAATGCACAGC-TGTGCGTGTGATCTCGTGGG--ATCATGTCTGTTGACGT	
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EF153835	GTTCTTGCATACCATTGAATGCTACGCTGTGT---AGTGTGGACGTGCTGGCGCGAAAAAT	120
AY090885	GTTCTTGCATACATTGATTG-TACGCTGTGTGTAGCGTGGGAGGGTGTGGCGCGAGAAAT	
AF161007	GTTCTTGCATAAACTATGCG-TACGCTGTGT---GGCGTTGGACGTGCTGGTGGCGAAAT	
DQ846902	GTTCTTGCGTTATGTT-TGTGCCCCGCTATGG---GATTGGTTATGCTAGCGCGAAACT	
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EF153835	GTGTTGT---CTTTCGCGCTTTACAGACCGTAATTTAGGCACGCCCTTCGTTAC---ATG	180
AY090885	GTGTTGT---ATTCGCGCTTTACAGACCGTAATTCAGGCGCCCTCTCGTTAC---ATG	
AF161007	GTGTTGTTCTCTCCGTGCTTTACAGACCGTAATTTAGGTACGTCCCTCGTTAT---ATG	
DQ846902	GTCAGTT---TATTCGCGTTTTACACACCGTAACTCGGGCGTGGCCATTCTCATGAATG	
	** *	
EF153835	CGATAGCTGAATGC-CTCGCCAATAGGCATTGCAATTGAACATTTCGACCTGAA	235
AY090885	TGATAGCGGAATGC-CTCGACAATAGGCATTGCAAC-----	
AF161007	CGATAGCTAAATGC-CTCGCCAATAGGCATTGTACT-----	
DQ846902	CTGTGGTGGAATATGCCTAGCATGTGGCGTTCGTT-----	
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(C) Alignment of the primary sequences of four species from four families of animals.

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>AY090885      -----ACCA-AAAAAATG-C-AC--TGCATGTGCATGT-TTTTG-T-TGCT-   60
>FJ416518      -----CG-CGC--ATGAC-TT--GAC-TGAGT-CGT-GTGCGGTAT--TG
>EU571257      -----TAT-AAACTA-T-C--ACG---AC--GCC-CAAAA-AGTCGTG-GCT----T-
>AY599790      ATTTATATATTAAACTATCTT--ATG-TGTCTTTAA-CGGGC-ATC-ATAAG-T----GC
                        * *                               * * *

>AY090885      A-G---TA-AT--CA-C-G-C-TC-----CG--GCG-TG-TTC-TTGC-ATAAC-AT-   120
>FJ416518      A-G--GTG--T--CA-C-GCGTG----TTAAA--GT--TGAATCGCCGT-GTCCC--T-
>EU571257      G-G--GTC-TTGCCAGCTGGCGTGATTTCCCTGCAATTCTG-TGGGGTGCCGGATCTATG
>AY599790      ATGATGTGATCA-TA-T-GGA-TG-----TA--AC--AA-TTC-ATAT-ATCA---T-
                        * *      * * *                               *

>AY090885      --TGATTG-TA-C-G---CTGTGTGTAG--CG--T-----G-G-----G---AGG-GTG   180
>FJ416518      --TGAAGGGCAGCAG---C-AT-TGGACT-CGCATTCTCTATG-----G---AAACTTG
>EU571257      GCTTTTCCCTAAT-GTGCC-GGATGCACC-CACTC-CT-GG-GCTGATTGCTTAGGTGAG
>AY599790      --TAAT---AA-A-G---G-ATATGGTTAACGC-TACT-TT-G-----T---GTGCATA
                        *      * *      **      *      *

>AY090885      -T--GG-CG-CG-A---G-A-----AT----GT-GT-TGTATTT--CG-CGC-TT-TACA   240
>FJ416518      ----AG-TG-CG-AA--G-G-----CTAA-AG--AT-ACTATTTTCCTTCGC-CC-AA-A
>EU571257      GTGGAGACGGCGGAGTCGTGGCTCAATTTCAAGTCATATATACG-CA-CGCTCCGTTGT
>AY599790      TTT-AACCA-TT-AT-TTTT-----AT-----CT-AAAAAAT--AA-TAAATT-TTGG
                        *      *      *      *

>AY090885      -GACCGT-AATTCAGGC---G-CCC-CTC-TCGTTACATGTG-AT-A-GCGGAATGCCT   300
>FJ416518      -AAACCA-ATAGCAGAC---GGTCC-CAA-TAGCTGAGACAAACAA-A-GCGG-----
>EU571257      CGAGCCTCATTGATGGCTTAGGCTTACAAGTAGTGGTGATGTATCTGATGCAA-----
>AY599790      -TATAAA-ATCAAATGT---G-TAG-CAA-ATGTT-T-A-GT--AA-A-CCAA-----
                        *      *      *      *      *      *      *

>AY090885      CGA--CAA---TA----GGCAT-TT--GCAAC   332
>FJ416518      TGA--CAA---TA----AACAT-CC--AAAAA
>EU571257      CAATTCTTGTTTTGCACATTGTGCTTAACTTT
>AY599790      -AA---AA---AT----CTTAA-TT--ATGAC
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