

Table S4. Position of conserved structural elements of the CR in Lacertidae.

| Species | TAS 1 | | TAS 2 | | CSB 1 | | CSB 2 | | CSB 3 | |
|----------------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | From | To | From | To | From | To | From | To | From | To |
| <i>Acanthodactylus aureus</i> | 15 | 38 | 83 | 92 | 726 | 763 | 1012 | 1029 | 1065 | 1084 |
| <i>Ac. boskianus</i> | 15 | 38 | 83 | 92 | 725 | 762 | 1013 | 1030 | 1066 | 1085 |
| <i>Ac. erythrurus</i> | 15 | 38 | 83 | 92 | | | 252 | 269 | | |
| <i>Ac. guineensis</i> | 15 | 38 | 64 | 73 | 725 | 763 | | | | |
| <i>Ac. schmidtii</i> | 15 | 38 | 83 | 92 | 724 | 761 | 1010 | 1027 | 1063 | 1082 |
| <i>Australolacerta australis</i> | 15 | 38 | 108 | 117 | | | 1011 | 1028 | 1065 | 1084 |
| <i>Algyroides nigropunctatus</i> | 15 | 38 | 116 | 125 | | | | | | |
| <i>Darevskia armeniaca</i> | 264 | 287 | 357 | 366 | 979 | 1016 | 1266 | 1283 | 1320 | 1339 |
| <i>D. brauneri</i> | 119 | 142 | 212 | 221 | 834 | 871 | 1121 | 1138 | 1175 | 1194 |
| <i>D. caucasica</i> | | | 257 | 266 | 691 | 728 | | | | |
| <i>D. chlorogaster</i> | 629 | 652 | 1585 | 1594 | 1342 | 1379 | 1629 | 1646 | 1683 | 1702 |
| <i>D. clarkorum</i> | | | 521 | 530 | | | | | 560 | 579 |
| <i>D. daghestanica</i> | 325 | 348 | 419 | 428 | 1039 | 1076 | 1326 | 1343 | 1380 | 1399 |
| <i>D. dahli</i> | 262 | 285 | 355 | 364 | 977 | 1014 | 1264 | 1281 | 1318 | 1337 |
| <i>D. derjugini</i> | 175 | 198 | 1447 | 1456 | 812 | 849 | 1099 | 1116 | 1153 | 1172 |
| <i>D. mixta</i> | 266 | 289 | 359 | 368 | 981 | 1018 | 1268 | 1285 | 1322 | 1341 |
| <i>D. parvula</i> | 258 | 281 | 351 | 360 | 973 | 1010 | 1260 | 1277 | 1314 | 1333 |
| <i>D. portschinskii</i> | 278 | 301 | 371 | 380 | 993 | 1030 | 1280 | 1297 | 1334 | 1353 |
| <i>D. praticola</i> | | | 109 | 118 | 379 | 416 | 665 | 682 | 719 | 738 |
| <i>D. raddei</i> | 2935 | 2958 | 4285 | 4294 | 3649 | 3686 | 3936 | 3953 | 3990 | 4009 |
| <i>D. rudis</i> | 260 | 283 | 353 | 362 | 974 | 1011 | 1261 | 1278 | 1315 | 1334 |
| <i>D. saxicola</i> | 270 | 293 | 363 | 372 | 985 | 1022 | 1272 | 1289 | 1326 | 1345 |
| <i>D. unisexualis</i> | 270 | 293 | 414 | 423 | 984 | 1021 | 1271 | 1288 | 1325 | 1344 |
| <i>D. valentini</i> | 235 | 258 | 328 | 337 | 950 | 987 | 1236 | 1253 | 1290 | 1309 |
| <i>Eremias argus</i> | 695 | 718 | 728 | 737 | 1404 | 1441 | 1690 | 1707 | 1744 | 1763 |
| <i>E. brenchleyi</i> | 1029 | 1049 | 1822 | 1831 | 1736 | 1773 | 2043 | 2060 | 2097 | 2116 |
| <i>E. dzungarica</i> | 484 | 507 | 577 | 586 | 1196 | 1233 | 1502 | 1519 | 1556 | 1575 |
| <i>E. multiocellata</i> | 531 | 555 | 581 | 590 | 1064 | 1101 | 1370 | 1387 | 1424 | 1443 |
| <i>E. nikolskii</i> | 1023 | 1046 | 1116 | 1125 | 1734 | 1771 | 2039 | 2057 | 2094 | 2113 |
| <i>E. przewalskii</i> | 618 | 641 | 711 | 720 | 1329 | 1366 | 1635 | 1652 | 1689 | 1708 |
| <i>E. scripta</i> KZL15 | 809 | 832 | 877 | 886 | 1520 | 1557 | 1826 | 1843 | 1880 | 1899 |
| <i>E. scripta</i> KZL44 | 676 | 699 | 744 | 753 | 1387 | 1424 | 1693 | 1710 | 1747 | 1766 |
| <i>E. stummeri</i> | 704 | 727 | 753 | 762 | 1415 | 1452 | 1720 | 1737 | 1774 | 1793 |
| <i>E. szczyrbaki</i> | 472 | 495 | 565 | 574 | 1183 | 1220 | 1489 | 1506 | 1543 | 1562 |
| <i>E. vermiculata</i> | 1104 | 1127 | 1197 | 1206 | 1816 | 1853 | | | 2167 | 2186 |
| <i>E. yarkandensis</i> | 469 | 492 | 562 | 571 | 1181 | 1218 | 1487 | 1504 | 1541 | 1560 |
| <i>Lacerta agilis</i> | 267 | 290 | 360 | 369 | 980 | 1017 | 1178 | 1295 | 1333 | 1352 |
| <i>L. bilineata</i> | 4 | 27 | 97 | 106 | 715 | 752 | 1012 | 1029 | 1066 | 1085 |
| <i>L. viridis viridis</i> | 321 | 344 | 414 | 423 | 1034 | 1071 | 1342 | 1359 | 1397 | 1416 |
| <i>Meroles squamulosus</i> | | | | | 713 | 750 | 999 | 1016 | 1051 | 1070 |
| <i>Mesalina olivieri</i> | 15 | 38 | 142 | 151 | 725 | 762 | 1034 | 1051 | 1089 | 1108 |

| | | | | | | | | | | |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| <i>Pedioplanis laticeps</i> | 15 | 38 | 108 | 117 | 725 | 762 | 973 | 990 | 1065 | 1084 |
| <i>Phoenicolacerta kulzeri</i> | 400 | 423 | 494 | 503 | 1114 | 1151 | 1401 | 1418 | 1455 | 1474 |
| <i>Podarcis muralis</i> | 462 | 485 | 511 | 520 | 1172 | 1209 | 1458 | 1475 | 1512 | 1531 |
| <i>Podarcis siculus</i> | 432 | 455 | 526 | 535 | 1144 | 1181 | 1430 | 1447 | 1484 | 1503 |
| <i>Psammodromus algirus</i> | 15 | 38 | 190 | 199 | 727 | 764 | 1016 | 1033 | 1070 | 1089 |
| <i>Takydromus amurensis</i> | | | 1486 | 1495 | 1243 | 1280 | 1531 | 1548 | 1586 | 1605 |
| <i>T. kuehnei</i> | 400 | 423 | 1775 | 1784 | 1113 | 1150 | 1400 | 1417 | 1805 | 1824 |
| <i>T. septentrionalis</i> | 1502 | 1525 | 2876 | 2885 | 2218 | 2255 | 2505 | 2522 | 2559 | 2578 |
| <i>T. sexlineatus</i> | | | 2031 | 2040 | | | | | | |
| <i>T. sylvaticus</i> | 1040 | 1063 | 2414 | 2423 | 1756 | 1793 | 2043 | 2060 | 2097 | 2116 |
| <i>T. wolteri</i> | 1440 | 1463 | 2818 | 2827 | 2157 | 2194 | 2445 | 2462 | 2500 | 2519 |
| <i>Zootoca vivipara</i> | 258 | 281 | 351 | 360 | 971 | 1008 | 1258 | 1275 | 1313 | 1332 |