

Appendix 2.

Human retinal disease loci mapped against the canine genome. Based on the corresponding intervals, potential candidate genes are identified from the canine retinal EST library. The number of those ESTs is provided in the last column (EST contained in the complete database/subset also included in the currently presented RH mapping project). Genomic regions containing ESTs mapped in the present study (shaded) are also illustrated in Supplementary figure 1.

| Human | | | | | | Canine | | |
|-------|-------|--------|---------------|------------------|-------------------------|--------------------------|--------|----------------------------------|
| Chr | Locus | OMIM | Location | flanking markers | Position (bp) | ortholog canine sequence | strand | ESTs mapped from database/RH map |
| 1 | LCA9 | 608553 | 1p36.23 | D1S1612-D1S228 | 8040572-13859124 | CFA5:64652546-66517205 | + | 28/2 |
| | | | | | | CFA2:88020798-88405323 | - | |
| | | | | | | chrUN:60347605-60368601 | + | |
| | | | | | | chrUN:62101548-62119159 | - | |
| | | | | | chrUN:66071580-66084780 | + | | |
| | | | | | | CFA2:86426534-87905547 | - | |
| | RP32 | 609913 | 1p13.3-p21.2 | D1S2896-D1S457 | 101745221-110680571 | CFA6:44698496-51742594 | - | 10/3 |
| | CORD8 | 605549 | 1q12-q24 | D1S1653-D1S403 | 156199398-161994180 | CFA38:22283654-26597868 | - | 24/4 |
| | AXPC1 | 609033 | 1q31-q32 | D1S2692-D1S414 | 206105499-209109593 | CFA7:9671270-12387211 | + | 3/0 |
| 2 | RP28 | 606068 | 2p16-p11 | D2S2225-D2S296 | 62669080-66060510 | CFA10:65579898-68516604 | + | 22/0 |
| 3 | CRV | 192315 | 3p21.3-p21.1 | D3S1578-D3S3564 | 42393981-53681782 | CFA23:14553524-15191495 | + | 67/2 |
| | | | | | | CFA23:4816064-6106351 | - | |
| | | | | | | CFA20:3018241-3096906 | - | |
| | | | | | | CFA20:39320754-46575260 | - | |
| 4 | WFS2 | 604928 | 4q22-q24 | D4S1591-D4S3240 | 102432232-110014375 | CFA32:25868967-32103628 | + | 23/0 |
| | RP29 | | 4q32-q34 | D4S621-D4S2417 | 173299575-180405742 | CFA25:25846257-28545997 | + | 20/0 |
| | | | | | | CFA16:53605947-56861582 | both | |
| 5 | MCDR3 | | 5p15.33-p13.1 | D5S1981-D5S2031 | 1207429-21139328 | CFA34:3125621-15010973 | - | 12/2 |
| | | | | | | CFA4:86735622-91481082 | - | |
| 6 | MCDR1 | 600790 | 6q14-q16.2 | D6S249-D6S1671 | 98224629-100662446 | CFA12:59071383-61209976 | + | 5/1 |
| 7 | MDDC | 153880 | 7p21-p15 | D7S493-D7S526 | 21771620-30915388 | CFA14:38623199-46545351 | + | 27*/2 |
| 8 | CORD9 | | 8p11 | D8S1820-D8S532 | 28053522-40907821 | CFA25:31249243-32439293 | - | 22/3 |
| | | | | | | CFA16:28875394-37773617 | - | |
| | | | | | | CFA16:28535508-28868434 | + | |
| | | | | | | CFA16:27482524-28363026 | - | |

| | | | | | | | | |
|----|-------|--------|---------------|------------------------|---------------------|--|---|------|
| | OPA6 | 258500 | 8q21-q22 | D8S1702-D8S1794 | 83778591-95651170 | CFA29:32673799-42260711 | + | 13/0 |
| 9 | JBTS1 | 213300 | 9q34 | D9S114-D9S1838 | 135944697-139756701 | CFA9:51419001-54557903 | both | 13/2 |
| 10 | RNANC | 221900 | 10q21 | D10S522-D10S1418 | 68534824-70182776 | CFA4:21694550-23155776 | + | 4/0 |
| 11 | EVR3 | 605750 | 11p13-p12 | GATA34E08-D11S4102 | 21000000-36734089 | CFA21:46126390-53491096 | + | 24/2 |
| | | | | | | CFA18:34497142-40084603 | - | |
| | CORS2 | 608091 | 11p12-q13.3 | D11S1344-D11S4191 | 46123506-59756405 | CFA18:40085790-46314761 CFA21:13340565-13386177 CFA20:21435712-21464744 CFA6:7900841-7937989 CFA4:22977575-22994071 CFA4:46366368-46384300 CFA6:8749914-8772571 CFA21:53510516-53790274 | both both both - + + - + | 18/0 |
| 15 | MRST | 602685 | 15q24 | D15S211-D15S152 | 78979965-83684265 | CFA9:58578673-60793304 | both | 35/4 |
| | | | | | | CFA3:51775570-51817162 | + | |
| | | | | | | CFA3:56724687-61088554 | both | |
| | | | | | | CFA30:41241942-41467666 CFA30:43133847-43185947 | + both | |
| 16 | RP22 | 602594 | 16p12.3-p12.1 | D16S287-D16S420 | 17816294-24143913 | CFA5:68174947-68319439 | - | 19/3 |
| | | | | | | CFA6:24756482-28170903 | both | |
| | | | | | | CFA6:28875901-31607111 | + | |
| | | | | | | CFA6:33803189-33826628 | - | |
| | | | | | | CFA6:41861714-41900999 | - | |
| | FHASD | 609218 | 16q23.2-q24.2 | D16S3098-D16S2621 | 80005897-86531141 | CFA5:68266446-73505339 | - | 12/1 |
| 17 | CACD | 215500 | 17p13 | D17S1810-CHLC GATA7B03 | 4969631-8143489 | CFA9:39601215-39632002 CFA5:33584798-36086327 | + both | 3/0 |
| 18 | OPA4 | 605293 | 18q12.2-q12.3 | D18S34-D18S479 | 37502223-46315724 | CFA7:46574549-52052888 | - | 47/3 |
| | | | | | | CFA7:81615326-83692592 | both | |
| 21 | USH1E | 602097 | 21q21 | D21S1905-D21S1913 | 19866516-31350253 | CFA31:18731144-29038551 | + | 10/2 |
| 22 | OPA5 | 610708 | 22q12.1-q12.3 | D22S1148-D22S283 | 24676420-35081028 | CFA26:22730380-28057763 | + | 28/0 |
| | | | | | | CFA10:24542445-24576636 | - | |
| | | | | | | CFA10:31129931-34158807 | - | |
| X | RP23 | 300424 | Xp22 | DXS1223-DXS7161 | 8453939-18964721 | CFX:5364711-14997605 | + | 30/1 |

| | | | | | | | |
|------|--------|--------------|-----------------|---------------------|---|-------------|------|
| OPA2 | 311050 | Xp11.4-p11.2 | DXS993-DXS991 | 41032656-55536044 | CFAX:35449689-48533855 | both | 23/4 |
| RP24 | 300155 | Xq26-q27 | DXS8094-DXS8043 | 136064431-143836398 | CFX:110501790-113933437 CFX:114044686-114287023 CFX:113938744-116834770 | + - + | 0/0 |
| COD2 | 300085 | Xq27 | DXS292-DXS1113 | 142317338-148405384 | CFX:115738433-120600375 | + | 4/0 |

*28 clones, all representing TOMM7, were excluded from the count.