**Table S2** List of candidate genes for ectodermal dysplasia.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Canine  chromosome | | Position in bp  (CanFam3.1 assembly) | | Canine gene | | Gene ID | Gene name |
| 1 | | 30417176-30435995 | | *PERP* | | ENSCAFG00000030892 | TP53 apoptosis effector |
| 1 | | 40149569-40215208 | | *TAB2* | | ENSCAFG00000000373 | TGF-beta activated kinase 1/MAP3K7 binding protein 2 |
| 2 | | 73198036-73206153 | | *KDF1* | | ENSCAFG00000012214 | keratinocyte differentiation factor 1 |
| 4 | | 3610082-3669653 | | *EDARADD* | | ENSCAFG00000011040 | EDAR associated death domain |
| 5 | | 80864778-80913018 | | *CDH3* | | ENSCAFG00000020303 | cadherin 3 |
| 5 | | 14228082-14292889 | | *NECTIN1* | | ENSCAFG00000012012 | nectin cell adhesion molecule 1 |
| 6 | | 5700832-5719439 | | *NCF1* | | ENSCAFG00000011395 | neutrophil cytosolic factor 1 |
| 7 | | 1530334-1576172 | | *-* | | ENSCAFG00000031147 | - |
| 7 | | 1921085-1966949 | | *PKP1* | | ENSCAFG00000029929 | plakophilin 1 |
| 8 | | 14099773-14103345 | | *NFKBIA* | | ENSCAFG00000013418 | NFKB inhibitor alpha |
| 8 | | 9004514-9327083 | | *PRKD1* | | ENSCAFG00000012553 | protein kinase D1 |
| 8 | | 70738897-70789645 | | *TRAF3* | | ENSCAFG00000018075 | TNF receptor associated factor 3 |
| 9 | | 14560751-14589002 | | *AXIN2* | | ENSCAFG00000011236 | axin 2 |
| 9 | | 21190672-21195060 | | *KRT14* | | ENSCAFG00000031250 | keratin 14 |
| 10 | | 34907830-34940784 | | *EDAR* | | ENSCAFG00000001970 | ectodysplasin A receptor |
| 12 | | 49672757-49739850 | | *MAP3K7* | | ENSCAFG00000003123 | mitogen-activated protein kinase kinase kinase 7 |
| 13 | | 3204993-3363268 | | *GRHL2* | | ENSCAFG00000000587 | grainyhead like transcription factor 2 |
| 17 | | 38032447-38038363 | | *FOXI3* | | ENSCAFG00000031026 | forkhead box I3 |
| 18 | | 31675423-31693434 | | *TRAF6* | | ENSCAFG00000006813 | TNF receptor associated factor 6 |
| 21 | | 26394941-26593372 | | *STIM1* | | ENSCAFG00000005895 | stromal interaction molecule 1 |
| 25 | | 17952851-17958289 | | *GJB2* | | ENSCAFG00000029537 | gap junction protein beta 2 |
| 25 | | 17920820-17921605 | | *GJB6* | | ENSCAFG00000007316 | gap junction protein beta 6 |
| 25 | | 49165641-49166123 | | *TWIST2* | | ENSCAFG00000012469 | twist family bHLH transcription factor 2 |
| 26 | | 22408157-22480068 | | *KREMEN1* | | ENSCAFG00000011994 | kringle containing transmembrane protein 1 |
| 26 | | 7584880-7599401 | | *ORAI1* | | ENSCAFG00000008233 | ORAI calcium release-activated calcium modulator 1 |
| 26 | | 30428085-30437295 | | *TUBA3C* | | ENSCAFG00000031767 | tubulin alpha 3c |
| 27 | | 1316881-1323370 | | *HOXC13* | | ENSCAFG00000006648 | homeobox C13 |
| 27 | | 2519756-2526894 | | *KRT74* | | ENSCAFG00000025346 | keratin 74 |
| 27 | | 2706352-2712887 | | *KRT85* | | ENSCAFG00000007286 | keratin 85 |
| 28 | | 12965873-13001552 | | *CHUK* | | ENSCAFG00000009588 | conserved helix-loop-helix ubiquitous kinase |
| 32 | | 23948525-24042351 | | *NFKB1* | | ENSCAFG00000010730 | nuclear factor kappa B subunit 1 |
| 34 | | 21766678-21985146 | | *TP63* | | ENSCAFG00000013961 | tumor protein p63 |
| 35 | 7479358-7526357 | | *DSP* | | ENSCAFG00000009570 | | desmoplakin |
| 37 | 25462986-25475491 | | *WNT10A* | | ENSCAFG00000014987 | | Wnt family member 10A |
| 38 | 21378144-21392682 | | *NECTIN4* | | ENSCAFG00000012722 | | nectin cell adhesion molecule 4 |
| X | 32533312-32570609 | | *CYBB* | | ENSCAFG00000013933 | | cytochrome b-245 beta chain |
| X | 54389054-54515594 | | *EDA* | | ENSCAFG00000029925 | | ectodysplasin-A |
| X | 122078654-122253562 | | *IKBKG* | | ENSCAFG00000019605 | | inhibitor of nuclear factor kappa B kinase subunit gamma |

Genes potentially involved in ectodermal dysplasia were identified using NCBI Gene database. The canine chromosome, position of the gene, genes, gene ID and name are shown.