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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Caninechromosome | 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.