

Table S7. List of murine homologs of human disease genes whose tissue distribution at E14.5 is consistent with the corresponding disease phenotype.

Human disease	OMIM #	Endocrine	Genitourinary	Cardiovascular	CNS	Eye	Ear	Nose	Skeletal muscle	Skeleton	Gastrointestinal	Liver	Respiratory	Skin	Teeth	Limbs	Immune system	gene symbol (mouse ortholog)
AHC	300200																	<i>Nr0b1</i>
ALGS1	118450																	<i>Jaq1</i>
HPE9	610829																	<i>Gli2</i>
KNOBLOCH SYNDROME, TYPE I	267750																	<i>Col18a1</i>
MEB	253280																	<i>Pomqnt1</i>
BFPP	606854																	<i>Gpr56</i>
CHARGE	214800																	<i>Chd7</i>
OSX	300000																	<i>Mid1</i>
HPE4	142946																	<i>Tqif</i>
NALD	202370																	<i>Pex5</i>
MENTAL RETARDATION, X-LINKED	300419																	<i>Arx</i>
DFNB22	607039																	<i>Otoa</i>
DFNA12	601543																	<i>Tecta</i>
CCZ5	600881																	<i>Cryba1</i>
RP, LCA	268000																	<i>Crx</i>
MULTIPLE PTERYGIUM SYNDROME	265000																	<i>Chrnq</i>
MCOP3	611038																	<i>Rax</i>
MCOP59	601186																	<i>Stra6</i>
MAC and related disorders	610125																	<i>Otx2</i>
MCOP56	607932																	<i>Bmp4</i>
FRASER SYNDROME	219000																	<i>Fras1</i>
FRASER SYNDROME	219000																	<i>Frem2</i>
RENAL ADYSPLASIA	191830																	<i>Upk3a</i>
PPS	119500																	<i>Irf6</i>
ACG2	200610																	<i>Col2a1</i>
ACG1B	600972																	<i>Slc26a2</i>
WS1	193500																	<i>Pax3</i>
STL2	604841																	<i>Col11a1</i>
ECTODERMAL DYSPLASIA, ANHIDROTIC	612132																	<i>Nfkb1a</i>
SGBS1	312870																	<i>Gpc3</i>
ATS	301050																	<i>Col4a5</i>
SPD1	186000																	<i>Hoxd13</i>
HAND-FOOT-UTERUS SYNDROME	140000																	<i>Hoxa13</i>
CMH7	192600																	<i>Tnni3</i>
CMH10	608758																	<i>Myl2</i>
CMH12	612124																	<i>Csrp3</i>
ASD4	611363																	<i>Tbx20</i>
ASD2	607941																	<i>Gata4</i>
EDMD2	181350																	<i>Lmna</i>
CMH2	115195																	<i>Tnni2</i>
CMH9	192600																	<i>Myl3</i>
CMH8	608751																	<i>Ttn</i>
ASD3	108800																	<i>Myh6</i>
AMDH, BDC	201250																	<i>Gdf5</i>
TBS	107480																	<i>Sall1</i>
AOI	108720																	<i>Flnb</i>
FACIOGENITAL DYSPLASIA	305400																	<i>FGD1</i>
CHONDRODYSPLASIA, BLOMSTRAND TYPE; BOCD	215045																	<i>Pthr1</i>
DA2B	601680																	<i>Tnni3</i>
DA2B	601680																	<i>Tnni2</i>
CMPD	114290																	<i>Sox9</i>
AMDM	602875																	<i>Npr2</i>
UMS	181450																	<i>Tbx3</i>
PTHSL1	610042																	<i>Cntnap2</i>
HPE3	142945																	<i>Shh</i>
HPE2	157170																	<i>Six3</i>
Aniridia and related disorders	106210																	<i>Pax6</i>
MCOPCB3	610092																	<i>Chx10</i>
CCA2	601547																	<i>Crybb2</i>
CATARACT, CONGENITAL, CERULEAN TYPE, 3; CCA3	608983																	<i>Cryaa</i>
RIE1	180500																	<i>Pitx2</i>
A14, TDO	104510																	<i>Dlx3</i>
EXT1	133700																	<i>EXT1</i>
BDA1, ACFD	112500																	<i>Ihh</i>
BCNS	109400																	<i>Ptch1</i>
FEINGOLD SYNDROME	164280																	<i>Mycn</i>
ACLS	200990																	<i>vera</i>
CFNS	304110																	<i>Efnb1</i>
ACTH deficiency	201400																	<i>Tbx19</i>
FADS	208150																	<i>Rapsn</i>
DPD1	131300																	<i>Tqfb1</i>
SPONDYLOEPIPHYSEAL DYSPLASIA	602111																	<i>Mmp13</i>
EDM2	600204																	<i>Col9a2</i>
SPONDYLOEPIPHYSEAL DYSPLASIA, KIMBERLEY TYPE	608361																	<i>Aqc1</i>
SPONDYLOEPIPHYSEAL DYSPLASIA, PAKISTANI TYPE	612847																	<i>Paps2</i>
MCDS	156500																	<i>Col10a1</i>
BRACHYOLMIA TYPE 3	113500																	<i>Trpv4</i>
EDM1	132400																	<i>Col9a1</i>
EDM5	607078																	<i>Matn3</i>
EDM3	600969																	<i>Col9a3</i>
SEMDC	184250																	<i>Col2a1</i>
SVNS1	186500																	<i>Noq</i>
CACP	208250																	<i>Prq4</i>
ARCL1	219100																	<i>Fbln5</i>
BSS	605041																	<i>Cyld</i>
HEP	129490																	<i>Edaradd</i>
EPIDERMOLYSIS BULLOSA JUNCTIONALIS WITH PYLORIC ATRESIA	226730																	<i>Itqb4</i>
EPIDERMOLYSIS BULLOSA JUNCTIONALIS WITH PYLORIC ATRESIA	226730																	<i>Itqa6</i>
HEP	129490																	<i>Edar</i>
ALPS2B	607271																	<i>Casp8</i>
BLS, TYPE I	604571																	<i>Tap2</i>
SCID, AUTOSOMAL RECESSIVE	608971																	<i>Cd3d</i>
SCID, AUTOSOMAL RECESSIVE	608971																	<i>Cd3e</i>
CGD, AUTOSOMAL RECESSIVE CYTOCHROME b-POSITIVE, TYPE II	233710																	<i>Ncf2</i>
THYROID HORMONOGENESIS, GENETIC DEFECT IN, 4	274800																	<i>Iyd (0610009A07Rik)</i>
CHNG2	218700																	<i>Pax8</i>
ADT1P	175780																	<i>Col4a1</i>
DFNX2	304400																	<i>Pou3f4</i>
MCOP55	610125																	<i>Otx2</i>
PAPILLORENA SYNDROME	120330																	<i>Pax2</i>

Rows: selected human genetic diseases and corresponding responsible genes (mouse orthologs). Columns: tissues affected in the listed diseases, as assessed from OMIM analysis. Green cell, the gene is annotated to be expressed in the affected tissue; red cell, the gene is not annotated to be expressed in the affected tissue.